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DE-PROFESSIONALIZED AND DEMORALIZED: A LONGITUDINAL EXAMINATION OF TEACHERS' PERCEPTION OF THEIR WORK AND TEACHER TURNOVER DURING THE ACCOUNTABILITY ERA IN THE UNITED STATES

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DE-PROFESSIONALIZED AND DEMORALIZED: A LONGITUDINAL EXAMINATION OF TEACHERS' PERCEPTION OF THEIR WORK AND TEACHER TURNOVER DURING THE ACCOUNTABILITY ERA IN THE UNITED STATES

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

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DEDICATION

I dedicate this work to the teacher saints and teacher warriors throughout the United States, but especially to those who I have had the honor to fight beside in the trenches. We are at once loved and idealized and reviled and blamed for all the nation's ills. Still, we do the most important thing well; we love children. We sometimes appear to love the children in our schoolhouses even more than the children in our own houses, but it is simply that we know, and choose to demonstrate, that it really does take a village to love a child. I am proud to have been raised by a village of public school educators, and I am prouder that I have returned that service.

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ABSTRACT

The purpose of this dissertation, presented in a three article format, is to describe the changes in teachers' perceptions of their work, and how those changes relate to teacher turnover, through the state and federal accountability policy eras in the United States. The three articles are united by a teacher perception of de-professionalization and demoralization framework that is operationalized using the restricted use Schools and Staffing Surveys and Teacher Follow-up Surveys administered by the National Center for Education Statistics from 1993 to 2008. The first article uses hierarchical linear modeling to identify teacher and school level predictors of teacher perception of de-professionalization and demoralization and changes in teacher perceptions from the state accountability policy era of the mid-1990s through the height of the federal accountability era under the *No Child Left Behind Act of 2001*. The second article uses structural equation modeling to examine differences in the relationship of teacher perception of de-professionalization and demoralization to teacher intent to leave and realized turnover between teachers who cited accountability policies as a factor in their turnover decision and those who did not. The third article uses hierarchical linear modeling with teachers clustered within time periods to determine changes in the relationship of teacher perception of de-professionalization and demoralization to turnover in models that also include teacher and school context factors. Changes in these relationships are compared between public and private school teachers. Each article also discusses the findings in relationship to previous research, implications for policy and practice, and identifies limitations and future research directions.

Keywords: Accountability, Teacher Attitudes, Teacher Morale, Teacher Employment

Chapter I- INTRODUCTION

Since the first compulsory education laws were passed in the United States in the latter part of the 19th century into the first part of the 20th century, teachers have carried out their work against a backdrop of policy and politics. The primary feature of this political backdrop from the 1990s to present day has been the accountability policy movement. The purpose of my three-article dissertation, "De-professionalized and Demoralized: A Longitudinal Examination of Teachers' Perception of their Work and Teacher Turnover during the Accountability Era in the United States," is to arrive at a deeper understanding of the ways in which the accountability policy backdrop has changed the ways in which teachers' perceive their work and how these perceptions have influenced teacher turnover. The collection of three quantitative studies seeks to capture teacher sentiment at a national level by operationalizing a framework of teacher perception of de-professionalization and demoralization in the nationally representative Schools and Staffing Survey (SASS) dataset administered by the National Center for Education Statistics (NCES), and connecting a framework of teacher de-professionalization and demoralization to teacher turnover using the Teacher Follow-up Survey (TFS), a companion to the SASS. In addition, these studies include both teacher- and school-level context factors as predictors of teacher perception of de-professionalization and demoralization and teacher turnover which also allows for a contextualization of the phenomenon of teacher turnover in the accountability era.

My first dissertation article, "Teacher and School Predictors of Teacher De-professionalization and Demoralization Through the Height of the Accountability Movement in the United States," operates from a bottom-up policy implementation

perspective that treats teacher perception of de-professionalization and demoralization as an important policy outcome in and of itself. This article also creates a foundation for using a teacher de-professionalization and demoralization framework to predict the distal outcome of teacher turnover in the second and third articles of my dissertation. The study uses hierarchical linear modeling with post hoc testing of teacher level loglikelihood values to examine changes in teacher perception of de-professionalization and demoralization from the state era of accountability policy through the height of the federal era accountability under the No Child Left Behind Act of 2001 (NCLB). The same models also allow for the identification of significant teacher- and school-level predictors of teacher perception of de-professionalization and demoralization. My second dissertation article, "Examining the Relationship of Teacher Perception of Accountability and Assessment Policies on Teacher Turnover During NCLB," utilizes the teacher de-professionalization and demoralization framework in structural equation models as a predictor of the two facets of teacher turnover, teachers leaving the profession and teachers moving schools. This study also leverages TFS questions, included in the 2008-2009 and 2012-2013 NCES surveys, regarding the influence of accountability and assessment policies on a teacher's decision turnover, to construct teacher perception of accountability comparison groups. These accountability perception groups allow for the comparison of the relationship of de-professionalization and demoralization to teacher turnover in teachers who cite accountability policies as a factor in their turnover and those who did not. My third dissertation article, "De-professionalized and Demoralized: A Framework for Understanding Teacher Turnover in the Accountability Policy Era," is a culmination and extension of the work in the first two articles. This study utilizes

composite variables of teacher perception of de-professionalization and demoralization as predictors of teachers leaving the profession and moving schools in hierarchical linear models with teachers nested within time cohorts. This study uses the SASS and TFS data sets from 1993-1995 and 1999-2001, the height of the state era of accountability, and from 2003-2005 to 2007-2009, the height of the federal era of accountability, to examine the change in the relationship of teacher de-professionalization and demoralization to turnover during the scope of the U.S. accountability era. I also used two separate models to compare this relationship between public school teachers, who are mandated policy implementers, and private school teachers, who may be affected by policy spillover effects, but who are not legally mandated policy implementers. Collectively, the articles in this manuscript make important contributions to education policy and leadership research by (1) demonstrating a framework approach to understanding the intersection of educational policy, leadership, and workforce issues, (2) defining and operationalizing a teacher perception of de-professionalization and demoralization framework for understanding changes in teachers' perception of their work in the era of accountability policy, an era which is beginning a new chapter with implementation of the *Every Student Succeeds Act*, and (3) providing a more complete understanding of the complement of teacher, school, and policy factors, and their convergence, that lead to teacher turnover in the United States. This introduction to my dissertation work proceeds by first, discussing implications of the work. Next, I will highlight the important conceptual and methodological connections between the studies, and finally, I will provide a summary of each of the articles included in this dissertation work.

This dissertation work has implications for both research and practice. The collection of studies presented in my dissertation work demonstrate the process of constructing an explanatory framework from multiple sources of theory across multiple fields of education research. The teacher perception of de-professionalization and demoralization framework was informed by conceptual policy work examining the "unintended consequences" of accountability policy (Darling-Hammond, 2007; Milner, 2013; Ravitch, 2002) and characterizations of teacher demoralization and value dissonance within school organizations during the accountability policy era that emerge largely from the educational social psychology and educational philosophy disciplines (Santoro, 2011a, 2011b; Skaalvik & Skaalvik, 2010). By combining conceptual and qualitative findings from multiple disciplines within educational research, I could construct a framework that includes teachers' perceptions of the technical core of their work and the affective responses to their work, and that framework could be used to both describe and explain teacher turnover during the accountability policy era in the United States. My dissertation work also demonstrates the operationalization of a theoretical framework within the existing SASS data. The SASS and TFS continue to be one of the most utilized national level data sets in the U.S. due to their comprehensive approach to collecting both perceptual, contextual, and demographic data from teachers and school leaders (Boyce, 2015). Operationalizing underlying latent constructs using existing observed indicators to create parsimonious quantitative models of educational phenomenon is an important tool, and this dissertation work demonstrates the possibilities of this approach. Finally, my dissertation work shows multiple methodological approaches to understanding the complex, multifaceted phenomenon of teacher turnover

in the age of accountability. Multigroup HLM, SEM with comparison groups, and HLM with randomly varying slopes between SASS cohorts allowed for the incorporation of a diverse range of teacher- and school-level variables that are necessary for a more complete understanding of the highly contextualized nature of teacher turnover, and this contributes evidence for the value of multiple methodological approaches for understanding a single educational outcome.

The dissertation work presented here also has important implications for practice in educational policy and leadership. From an educational policy perspective, the articles presented here demonstrate that accountability policies have a relationship with teachers' perception of their work, and that this relationship has a disaffection component that positively relates to teacher turnover. The U.S. is currently in the midst of a policy shift from a federal-centric to state-centric accountability policy paradigm, and understanding teachers' perception of their working conditions can add to the discussion of what effective accountability policy for all stakeholders should look like. From an educational leadership perspective, the conclusions drawn from these articles suggest that the ways in which educational leaders support teachers through changing policy climates significantly influence their response to policy and their perceptions of their work. Policy leadership is not an explicitly articulated domain in the most recent version of the Professional Standards for Educational Leaders (National Policy Board for Educational Administration, 2015). However, policy implementation by educational leaders has the potential to hinder or improve effectiveness across all other leadership domains (Diamond, 2007, 2012; Spillane, Parise, & Sherer, 2011). This dissertation work echoes previous research that shows that principal leadership behaviors and teacher perception

of principal leadership proximally affects teachers' perception of their work and can distally affect teacher turnover (Ingersoll, 2001; Urick, 2016; Wahlstrom & Louis, 2008; Wronowski, 2017). However, this work adds to the educational leadership field's understanding of how these relationships are affected by changing policy contexts, an understanding that should influence the ways in which we prepare educational leaders as policy interpreters and implementers. While each article in this dissertation is a complete study, the articles are connected by the accountability era of U.S. educational policy, the teacher perception of de-professionalization and demoralization framework, the use of the nationally representative SASS and TFS data sets, and the inclusion of teacher- and school-level context variables.

The Accountability Policy Era in the United States

School accountability policy is part of a larger class of public policy designed to improve educational equity between historically marginalized student groups, including students of color and students of poverty, and their majority white, middle-class counterparts. Accountability is a broad policy term that generally includes any public policy that incentivizes, either explicitly or implicitly student performance on standardized assessments; incentives can come in the form of either rewards or sanctions and may be issued at the school or teacher level (Figlio & Loeb, 2011). Accountability policies are rooted in a rational choice model of school reform, the assumption of which is that schools and teachers will rationally respond to rewards and/or sanctions by improving instructional and organizational practices. Improvement in instructional and organizational practices will in turn produce improved student performance that can be measured as standardized academic outcomes (Diamond, 2012). Accountability policy in

the U.S. has evolved from the 1990s to present, and this dissertation is situated across that evolution.

The two time periods that are compared in this study include the state-level accountability era of the late 1990s through the early 2000s, including passage and implementation of the *Improving America's Schools Act of 1994* (IASA), and the federal-era of accountability spanning from the early 2000s to 2014 which was initiated by the passage of NCLB (Coburn, Hill, & Spillane, 2016). The state-level accountability era was largely characterized by inconsistency in policy design and implementation (Superfine, 2005). The IASA along with the *Goals 2000: Educate America Act*, represented an attempt to enact nationwide, systemic educational reform while also allowing states local flexibility in implementation (Coburn et al., 2016; Superfine, 2005). During this policy period, a significant number of states developed academic content standards in core subject, and by 2000, more than 40 states issued accountability reports at the state or local level (National Center for Education Statistics, 2003). However, true accountability, which is dependent on an incentive structure, was never realized in most states because there were few policies that had clearly delineated standards-assessment-incentive plans (Hamilton, Stecher, & Yuan, 2008).

The federal era of accountability represents a "diffusion up" of state accountability policy innovations to the federal level (Smith & Larimer, 2016). NCLB is widely viewed as the pinnacle of accountability policy in US public education (Galey, 2015; Haney, 2000; Mathis & Trujillo, 2016). In addition to the mandated accountability components of NCLB which required schools to meet annual academic proficiency targets that were largely measured by standardized assessments, the federal government

further promoted the accountability agenda through the 4.35 billion dollar *Race to the Top* (RTTT) grant competition. In their applications for RTTT, states were awarded points specifically for satisfying accountability requirements such as performance-based teacher evaluations, adopting common standards, and turning around low performing schools. More than 40 states applied for RTTT grants, and many of these states passed state legislation to place themselves in a competitive position. Much of the new state-level legislation centered around the adoption of the Common Core State Standards (CCSS) and inclusion of Value Added Models (VAM) or removals of legislative bans on using VAM (Bowen, 2010). NCLB also included mandates for all teachers to be "highly qualified," which changed the requirements for those entering the teaching field and for teachers who were already teaching years (see Eppley, 2009; Manna & Petrilli, 2008; Rutledge, Harris & Ingle, 2010). Against this policy backdrop, the teaching profession fundamentally changed in both the technical core of its work and in the morale of those engaged in that work (Berryhill, Linney & Fromewick, 2009; Valli & Buese, 2007). The teacher perception of de-professionalization and demoralization framework used across the dissertation articles conceptualizes these changes.

The Teacher Perception of De-professionalization and Demoralization Framework

Teacher de-professionalization as conceptualized in this dissertation posits that accountability policies linked teacher and school evaluation to student performance on standardized assessments, and, in response to this pressure, curriculum and instruction were narrowed to focus on a standardized test criterion in limited subject areas, frequently without teacher input (Ingersoll & May, 2016; Ingersoll & Collins, 2017; Milner, 2013).

As early as 1988, Madaus (1988) predicted that as standardized tests became increasingly high-stakes, instruction and curriculum choices would be increasingly driven by the testing process. More recent research supports this prediction, relating NCLB's emphasis on standardized testing in mathematics and English language arts to an increase in time spent teaching these subjects, often at the expense of time spent teaching non-tested subjects (Berliner, 2016; Cawelti, 2006; Darling-Hammond, 2007; Longo-Schmid, 2016). Additionally, instructional strategies may have become limited to test preparation activities, especially in schools that have been identified as failing (Baker et al., 2010; Malen & Rice, 2016; Mintrop & Sunderman, 2009). Finally, it has been reported that teachers' influence over curriculum and instructional practices, either actual or perceived, has diminished in the years following the passage of NCLB (Powell et al., 2009; Schoen & Fusarelli, 2008; Stillings, 2005). Teacher perception of de-professionalization represents a disconnection from the technical core of their work, however, in the accountability policy era, teachers have also become disconnected from the moral component of their work.

Demoralization is conceptualized as the inability of teachers to access the moral rewards of teaching (Santoro, 2011a). NCLB has placed teachers in direct conflict with the ideals that brought them into the profession in the first place (Sahlberg, 2010). Teachers are given the essentially moral charge to help students flourish but are also forced to engage in practices that they believe stunt students' ability to flourish (Frank, 2016; Lopez, 2013; Santoro, 2016). There are three major facets of demoralization of teachers in the era of NCLB implementation. First, teachers must focus a larger portion of their time on administrative tasks related to accountability, second, teachers can

experience worry and stress related to accountability pressure, and third, teachers may have an increase in negative perceptions of students who consistently fail to perform at a proficient level on standardized tests.

In the era of NCLB implementation teachers time to work with students in a meaningful way is increasingly consumed with administrative tasks related to accountability (Bennett, Brown, Kirby-Smith, & Severson, 2013; Scheopner, 2010; Tidwell, 2014). Communities of teacher collaboration are focused on student standardized test data, student progress from standardized benchmark to benchmark, and next steps for increasing student achievement on state assessments (Wronowski, 2017). Time spent on accountability documentation and other paperwork burdens detract from what teachers view as their "calling" in teaching, serving the best interests of students (Bennett, Brown, Kirby-Smith, & Severson, 2013). The accountability burden has also led teachers feel intense performance pressure (Abrams, Pedulla, & Madaus, 2003; Baker et al., 2010). This pressure can manifest itself in feelings of worry and stress, both for themselves and their students, the endpoint of which is emotional exhaustion (Byrd-Blake et al., 2010; Dever & Carlston, 2009; Santoro, 2011a; Skaalvik & Skaalvik, 2011). Finally, student failure on standardized tests can lead teachers to engage in external attribution of those failures to student context factors, such as poverty, lack of parental involvement, and poor student motivation. External attribution of student failure can lead to teacher disengagement with students particularly if teachers are already experiencing other facets of demoralization (see Georgiou, Christou, Stavrinides, & Panaoura, 2002; Weiner, 1985). In this dissertation, the framework of teacher perception and

demoralization has been operationalized using items from the SASS and TFS data sets collected during the state and federal accountability eras.

The Schools and Staffing Survey and Teacher Follow-up Survey

All three of the studies in the dissertation are secondary analyses of the Schools and Staffing Survey (SASS) administered by the U.S. Department of Education and National Center for Education Statistics (NCES). The SASS and TFS surveys have been administered seven times from 1987-89 to 2011-2012. The data sets used in this study are the SASS and the corresponding TFS from the 1993-94/1994-95, 1999-00/2000-2001, 2003-04/2004-05, and 2007-08/2008-09 administrations. These data sets were chosen because they (1) capture the evolution of accountability policy in the U.S. from the state accountability era through the height of the federal accountability era, and (2) are similar enough in structure to make comparisons between years. Another advantage of the SASS survey is that it is constructed to be nationally representative for both public and private school teachers which allows for improved generalizability of conclusions compared to state and local education agency data sets (Tourkin et al., 2007, 2010). The public school samples for the SASS administrations included in the studies range from ~n = 8,969 – 10,202 schools and ~n = 46,700 – 56,350 teachers. The private school samples for the SASS administrations included in the study range from ~n = 2,620 – 3,620 schools and ~n = 6,640 – 10,760 teachers (NCES, n.d.). The SASS and TFS surveys have been used in a significant number of studies of teacher turnover, teacher perception, and principal leadership because they provide a rich and varied description of teacher and principal perceptions of their working conditions, many individual and school context variables, and follow teacher turnover decisions for a sample of SASS teachers (Boyce, 2015;

NCES, n.d.; Tourkin et al., 2010). In addition to the SASS items used to construct the latent constructs of teacher perception of de-professionalization and demoralization, several teacher and school context variables from the SASS data sets were included throughout the studies.

Teacher and School Context Variables of the Studies

As part of their meta-analysis of teacher retention predictors, Borman and Dowling (2008) classified moderators of teacher retention into five categories, teacher demographics, teacher qualifications, school organizational characteristics, school resources, and school student body characteristics. These five categories suggest that predictors of teacher retention have two analytical levels, teacher level and school level predictors. At the school level, school demographics, particularly racial and socioeconomic composition of the student body, have previously been shown to impact teacher turnover, particularly teacher mobility (Clotfelder et al., 2007; Freedman & Appleman, 2009; Hanushek et al., 2005; Ingersoll & May, 2012; Lankford, Loeb, & Wyckoff, 2002). Many studies have also shown an impact of school climate and school leadership on teacher turnover (Dorman, 2003; Guarino, Santibanez, & Daley, 2006; Hulpia, Devos, & Rosseel, 2009; Kraft, Marinell, & Shen-Wei, 2016; Loeb, Darling-Hammond, & Luczak, 2005; Shen, Leslie, Spybrook, and Ma, 2012; Urick, 2016; Weiss, 1999). At the teacher level several variables have been previously shown to influence teacher retention, and these include demographic variables such as age, gender, and race, as well as teacher professional characteristics such as years teaching experience, highest education level attained, type of teacher credential, and teacher subject specialty (Borman & Dowling, 2008; Guarino et al., 2006). These variables are important as control

variables because they have been shown to impact teacher turnover prior to the introduction of accountability policy, however, several variables such as school demographic variables and principal leadership may have a significantly different effect on teacher turnover since the introduction of accountability policies (Clotfelder, Ladd, Vigdor, & Diaz, 2004; Darling-Hammond, 2007; Diamond, 2007, 2012; Dunn, 2015; Hanushek & Rivkin, 2010; Thibodeaux, Labat, Lee, and Labat, 2015).

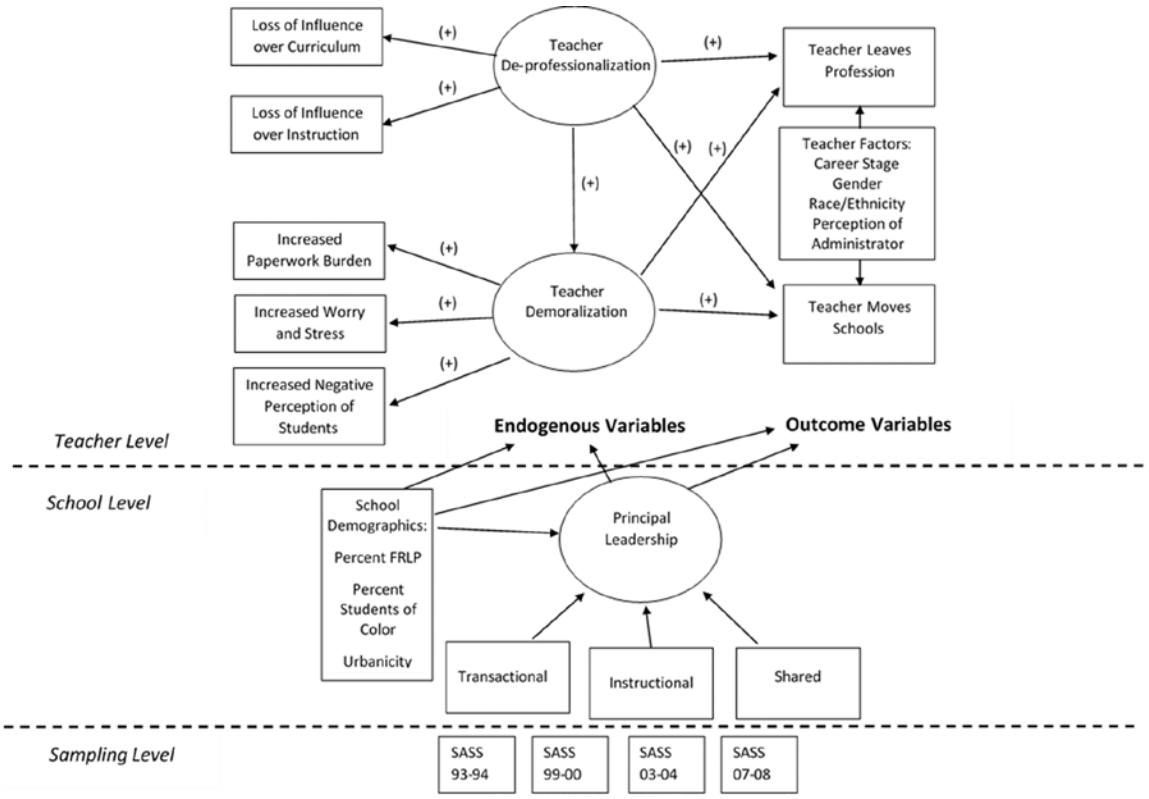

Figure 1.1: Conceptual Model of the Relationship of Teacher Perception of De-professionalization and Demoralization to Teacher Turnover in the Accountability Policy Era.

Article One:

Teacher and School Predictors of Teacher De-professionalization and Demoralization Through the Height of the Accountability Movement in the United States

This purpose of this study is to examine teacher de-professionalization and demoralization as unintended consequences of accountability policies using large, nationally representative samples of teachers surveyed in the Schools and Staffing Surveys during the state and federal accountability policy eras. This approach will allow for a more generalizable description of teacher and school level predictors of teacher perception of de-professionalization and demoralization. To this end, this study examines the following research questions:

1. To what extent have teacher perceptions of de-professionalization and demoralization changed during key time periods in accountability policymaking?
2. What teacher and school characteristics, including principal leadership, predict teacher perception of de-professionalization and demoralization during key time periods in accountability policymaking?
3. What are the differences in the change of teacher perception of de-professionalization and demoralization during key time periods in accountability policymaking by school contexts with intersections of high/low percentages of students of color and eligibility for free or reduced priced lunch?

Method

This study is a secondary analysis of the data from the National Center Education Statistics (NCES) Schools and Staffing Survey (SASS) across the 1993-1994, 1999-2000,

2003-2004 and 2007-2008 administrations. Multigroup hierarchical linear modeling (HLM) was conducted in Mplus 8 using MLR estimation (Heck & Thomas, 2015; Muthén & Muthén, 1998-2017). In this study, multiple groups were used as a structure to represent a time series design since SASS data are cross-sectional, nationally representative samples which repeat over time. Multi-group HLM produces estimates for each time point, or group, that can be compared in subsequent analyses to predict changes in teacher de-professionalization and demoralization in years preceding and following NCLB implementation. Two separate models were created using standardized composite variables of teacher perception of de-professionalization and demoralization as dependent variables, and each of these models included a comparison of four groups: 1994, 2000, 2004, and 2008. The equations for the HLM analysis using teacher de-professionalization (DEPROF) and demoralization (DEMORAL) are given in Chapter 2 of this volume.

Following the multigroup HLM, a series of subsequent analyses answered research questions on the comparison of time. First, we conducted a post hoc test of equality of unstandardized regression coefficients of teacher and school level variables (see Paternoster et al., 1998). We used a t-test with equal variance not assumed to compare teacher level and school level loglikelihood of displacement estimates for 2000 and 2004, the years immediately prior and after NCLB implementation. Finally, to determine how teachers' perception of de-professionalization and demoralization changed across time in different school types, a one-way ANOVA was applied to determine if there were differences in teacher perception of de-professionalization and demoralization between schools with intersections of high/low free/reduced lunch eligibility and high/low percentages of students of color.

Results

There was a significant increase in school- and teacher-level LLD of demoralization and de-professionalization estimates between 1994, the first analysis year, and 2008, the last analysis year. However, the only significant increase in teacher perception of demoralization and de-professionalization at the teacher- and school-levels between individual analysis years occurred between 2000 and 2004, which represents the transition from the primarily state level accountability era to the federal level accountability of NCLB. Teacher perception of unsupportive administration was a positive predictor of de-professionalization and demoralization across all years of the study, however there was a significant increase in coefficient following NCLB implementation. Urban and rural school location, compared to suburban school location was a significant positive predictor of de-professionalization and demoralization prior to NCLB, however, this these predictors were not significant following NCLB implementation. In all years, de-professionalization and demoralization were significant predictors of each other. We also found significant differences in teacher perception of de-professionalization between schools serving high/low eligibility for free/reduced lunch and high/low percentage students of color student populations across all four SASS samples [1994: $F(3,8550) = 138.58$, $p < .001$; 2000: $F(3,7290) = 164.23$, $p < .001$; 2004: $F(3,7240) = 281.67$, $p < .001$; 2008: $F(3,4460) = 59.79$, $p < .001$). An examination of the visual changes in standardized means of teacher perception of de-professionalization between the school types across time shows an increase for high-poverty schools that also serve a high percentage of students of color from 2000 to 2004 that followed a decrease in teacher perception of de-professionalization from 1994 to 2000. We observed an

increase in perception of demoralization in high-poverty schools that also serve a high percentage of students of color from 1994 to 2000, and the same increase was seen in high-poverty schools serving a low percentage of schools of color. However, both school types saw a decrease in teacher perception of demoralization from 2000 to 2004, immediately before and after NCLB implementation. However, teacher perception of demoralization in low-poverty schools that serve a high percentage of students of color sharply increased during the same period. In contrast, teacher perception of demoralization in low-poverty schools that serve a low percentage of students of color decreased between 2000 and 2004. This result suggests that the percentage of students of color served by a school is an important factor in teacher perception of demoralization. However, a review of the individual effects of these variables on teacher demoralization would suggest that poverty or FRPL has a more significant effect on teacher demoralization than a school serving a high percentage of students of color.

Article Two:

Examining the Relationship of Teacher Perception of Accountability and Assessment Policies on Teacher Turnover During NCLB

This study examines whether teacher perceptions of de-professionalization and demoralization, representing a specific type of dissatisfaction with their work, predict a teacher's intent to leave their position, and ultimately, their turnover. Additionally, to determine if there is an effect of teacher perception of accountability and assessment policies on teachers' perception of their work, this study compares these relationships in teachers who cited accountability and assessment policies as a factor in their turnover decision and those who did not by asking the following research question:

1. To what extent do teacher demoralization and de-professionalization predict a teachers' intent and occurrence of leaving their current school for teachers who respond that accountability policies are a reason for turnover compared to teachers who did not?

Methods

This study is a secondary analysis of the Schools and Staffing Surveys (SASS) and Teacher Follow-up Surveys (TFS) from the 2007-2008/2008-2009 and 2011-2012/2012-2013 administrations collected by the National Center for Education Statistics (NCES). Structural equation modeling (SEM) was applied using the variables outlined above in Mplus software (see procedures in Muthén & Muthén, 2015). Two separate SEM models were analyzed using the accountability was a factor/was not a factor in turnover decision data sets.

Variables

Teacher perception of accountability and assessment policies. The TFS surveys from 2008-09 and 2012-13 included three items related to how assessment and accountability policies related to their turnover decision, the decision to leave the profession, move to another teaching position, or stay in their current position. These items were scored on a five-point Likert scale (see Appendix A, Chapter 2, this volume), however, an examination of the frequency histograms showed a bimodal response pattern for each of these items. Therefore, two groups of teachers, those who cited accountability and assessment policies as relevant to their turnover decision and those who did not, were constructed using a composite score on these three items.

De-professionalization. Teacher de-professionalization is characterized as a loss of influence or control over the technical core of their work, specifically influence over

curriculum and instructional decisions as described previously (see Appendix A, Chapter 2, this volume).

Demoralization. In this study teacher perception of demoralization is operationalized as having a teacher component (see Appendix B, Chapter 2, this volume) that includes decreased time for instruction due to accountability administrative tasks and worry and stress with emotional exhaustion as an endpoint. Demoralization is also operationalized as having a student component that is conceptually related to teacher demoralization. Teachers may begin to attribute those low test scores to student factors outside of their control, including poverty, poor student health, lack of parental involvement or care, and poor student motivation.

Results

An examination of overall comparative fit statistics (AIC and Bayesian Information Criterion- BIC) shows that a SEM relating teacher de-professionalization and demoralization to teacher turnover and teacher intent to leave exhibits better overall fit in the data set containing observations from teachers who cited accountability and assessment policies as a factor in their turnover decision (AIC = 56846.54, BIC = 57297.87) compared to the data set containing teachers who did not factor accountability and assessment in their turnover decision (AIC = 70661.06, BIC = 71135.58). The only significant relationship of the latent de-professionalization and demoralization variables to teacher intent to leave and realized turnover, was the relationship of the teacher worry and stress factor to intent to leave and teacher attrition and mobility (Standardized Estimate = 0.267, $p < .001$; Standardized Estimate = 0.732, $p < .001$; Standardized Estimate = 0.684, $p < .001$, respectively). Intent to leave was not a significant predictor of either teachers leaving the profession or teachers moving schools.

In contrast to the SEM model in teachers who cited accountability and assessment policies as a factor in their turnover decision, the latent de-professionalization and demoralization variables were not significant predictors of teachers leaving the profession or moving schools in teachers who did not cite accountability and assessment policies as a factor in their turnover decision. However, a similar relationship to teacher worry and stress and intent to leave is observed in both models with worry and stress being a significant predictor of intent to leave (Standardized Estimate = 0.470, $p < .001$).

Article Three:

De-professionalized and Demoralized: A Longitudinal Examination of the Relationship Between Teachers' Perception of their Work and Turnover During the Accountability Policy Era

This study examines the relationship between teachers' perception of de-professionalization and demoralization and turnover from the state accountability era of the mid-1990s through the height of the federal accountability era in the mid-2000s. In addition to comparing changes in this relationship across time, this study also compares the relationship of perceptions of de-professionalization and demoralization and turnover between public and private school teachers. While public schools found themselves responsible for carrying out accountability mandates during this policy period, private schools were frequently not required to adhere to the same testing and reporting requirements, therefore, private school teachers may be a useful comparison group for assessing the effect of accountability policies on the public school teacher workforce (Wong, Cook, & Steiner, 2015). Additionally, the overall change in teacher turnover by

teacher and school demographic groups, and the effects of school contextual factors on teacher perception of their work were examined by asking the following questions:

1. What is the change in the relationship between teacher perception of de-professionalization and demoralization and leaving the profession or moving schools through the accountability policy era in the United States?

2. How does the relationship between teacher perception of de-professionalization and demoralization and turnover differ between public and private school teachers?

3. What are the teacher- and school-level predictors of teacher perception of de-professionalization and demoralization and turnover throughout the accountability policy era?

Method

This study is a secondary analysis of the NCES SASS and TFS from the 93/94-94/95, 07/08-08/09, 03/04-04/05, and 11/12-12/13 administrations Hierarchical Linear Modeling (HLM) in Mplus software (see procedures in Muthén & Muthén, 2015). Separate HLM models were analyzed using the public and private teacher and administrator data sets. Composite measures of teacher perception of de-professionalization and demoralization were created by taking the mean of z-score standardized items described previously. Teachers are at the first level of the model, and all contextual variables, including school-level contextual variables, were added at this level. This is an appropriate strategy because in the TFS most teacher respondents are not clustered within schools. Categorical covariates including teacher gender, experience level, certification type, teacher race/ethnicity, school urbanicity, and school high or low percent students of color were dummy coded. School percent free/reduced lunch, teacher

perception of administrator support, and composites of principal managerial, instructional, and shared leadership were included as continuous predictors. SASS and TFS cohort was the defined cluster of this study, and, to determine changes in the relationship of de-professionalization and demoralization on teacher turnover, an orthogonally coded linear time variable was regressed on the dependent teacher turnover variable (ATTRIT) and on the randomly varying regression slopes of de-professionalization and demoralization on teacher turnover.

Results

Overall teacher attrition, leaving the profession, and teacher mobility, moving schools, showed a non-significant decrease over the time-period of this study. Teacher perception of de-professionalization and demoralization were both significant positive predictors of teacher attrition ($B = 0.12$, $OR = 1.13$, $p < .001$; $B = 0.19$, $OR = 1.20$, $p < .001$, respectively), and teacher perception of de-professionalization was a significant predictor of teacher mobility ($B = 0.11$, $OR = 1.11$, $p < .001$) across the complete public teacher sample. A similar result was observed in private school teachers with de-professionalization ($B = 0.17$, $OR = 1.19$, $p < .001$; $B = 0.15$, $OR = 1.16$, $p < .001$, respectively) and demoralization ($B = 0.31$, $OR = 1.36$, $p < .001$; $B = 0.27$, $OR = 1.31$, $p < .001$, respectively) predicting both teacher attrition and mobility. However, the relationship of de-professionalization to public school teacher attrition ($B = -0.04$, $B/S.E. = -41.47$, $p < .001$) and teacher mobility ($B = -0.02$, $B/S.E. = -7.43$, $p < .001$) significantly decreased over time from 1993 to 2008. Comparatively, the relationship of teacher perception of de-professionalization to private school teacher attrition also significantly decreased from 1993 to 2008 ($B = -0.05$, $B/S.E. = -41.34$, $p < .001$). However, the

relationship of de-professionalization to private school teacher mobility (B = 0.02, B/S.E. = 4.63, p < .001) significantly increased from 1993 to 2008. The relationship of teacher perception of demoralization to attrition significantly increased from 1993 to 2008 in both public (B = 0.02, B/S.E. = 2.49, p < .01) and private school teachers (B = 0.01, B/S.E. = 25.23, p < .001). The change in the relationship of demoralization to teacher mobility differed between public and private school teachers with the relationship significantly increasing from 1993-2008 in public school teachers (B = 0.07, B/S.E. = 8.59, p < .001), and the relationship significantly decreasing in private school teachers (B = -0.06, B/S.E. = -17.76, p < .001). Several teacher and school demographic factors were significant predictors of teacher attrition and mobility in the complete public and private school teacher groups (see Chapter 3, this volume). Several school contextual factors, including principal leadership domains and demographic factors were also significant predictors of teacher perception of de-professionalization and demoralization (see Chapter 3, this volume).

Overall Discussion of the Studies

Much of the previous research into teacher perceptions of their work during the accountability policy era in the United States has provided rich qualitative and conceptual descriptions that have allowed for the operationalization of a teacher de-professionalization and demoralization framework in the nationally representative NCES SASS surveys (see Byrd-Blake et al., 2010; Mausethagen, 2013; Milner, 2013; Santoro, 2011a, 2013; Tidwell, 2014). This collection of studies has demonstrated that teacher perceptions of de-professionalization and demoralization increased from the state era of accountability policies through the height of the federal accountability policy era. Further,

there is a significant relationship between teacher de-professionalization and demoralization and teacher attrition and mobility. This finding echoes a significant body of previous work linking teachers' dissatisfaction with working conditions to teacher turnover (see Ingersoll, 2001a, 2001b; Sutcher, Darling-Hammond, & Carver-Thomas, 2016; Horng, 2009; Kersaint, Lewis, Potter, & Meisels, 2007; Loeb, Darling-Hammond, & Luczak, 2005; Shen, 1997). However, this work adds to our understanding of the relationship between teacher perception of accountability policies, teacher affective dissatisfaction and value dissonance to turnover by showing significantly different relationships between teacher demoralization and turnover in teachers who cite accountability as a reason for turnover and those who did not. This finding is congruent with the idea that, in an era dominated by accountability and assessment policies, teachers may be "principled leavers" of their schools or the teaching profession (Santoro, 2011b, p. 2671). This new understanding of the relationship between teachers' affective response to accountability policies and their turnover is important as the United States transitions from NCLB to ESSA, where states have been given some space to innovate in the areas of student, teacher, and school evaluation.

The collection of studies also highlights the importance educational leaders as policy couplers. A negative teacher perception of administrator support significantly increased as a predictor of teacher de-professionalization and demoralization from the state to federal accountability eras, just as the relationship of teacher demoralization to turnover increased over the same period. This finding is congruent with a small group of studies that examine the ways in which principals implement accountability and assessment policies. Implementation plans that included shared decision making between

principals and teachers not only yield higher workplace satisfaction among teachers, but also produce improved achievement results (see Diamond, 2007, 2012; Ingersoll, Merrill, & May, 2016; Spillane, Parise, & Sherer, 2011). This finding also has important implications for the preparation of future educational leaders and suggests that principals should be trained in both policy sensemaking and implementation practices.

Unfortunately, this collection of studies also highlights the relationship between school demographic characteristics and accountability that has been suggested by previous research. Teachers in urban, high-poverty schools that also serve a large percentage of students of color are more likely to perceive de-professionalization and demoralization. These teachers are also more likely to turnover, and the significant relationship of de-professionalization and demoralization to both teacher attrition and mobility, may have exacerbated this context-dependent turnover in the federal accountability era. Given that urban, high-needs schools are more likely to experience a shortage of well-qualified, experienced educators, and that quality educators are an important determinant of student achievement, state and federal accountability policies may have exacerbated the very educational equity that they were designed to address (Darling-Hammond, 2007).

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Chapter II- ARTICLE ONE

"Teacher and School Predictors of Teacher De-professionalization and Demoralization Through the Height of the Accountability Movement in the United States"

Co-authored with Angela Urick, The University of Oklahoma

Submitted to *Educational Policy*

Abstract

The purpose of this study is to examine changes in teachers' perception of their work during key periods of the accountability and assessment policy movement in the United States. Throughout the rise of accountability policy in the U.S. there has been a tension between the professional education paradigm which seeks professionalization of educators and the policymaker paradigm that seeks accountability for educational outcomes. We utilize a teacher perception of de-professionalization and demoralization framework operationalized using the National Center for Education Statistics restricted Schools and Staffing Surveys data sets from 1993-94, 1999-00, 2003-04, and 2007-2008 (~N = 8,970 – 10,200 schools and ~N = 46,710 – 56,350 teachers) to examine changes in teachers' perception of their work from the rise of the state-level accountability movement of the 1990s through the height of the federal accountability movement of the early 2000s. Comparing years as groups in multiple group multilevel models including teacher- and school-level predictors, we find that teacher de-professionalization and demoralization increase from the state- to federal-level accountability periods. We also find that there are significant predictors of de-professionalization and demoralization at the teacher-level, including teacher perception of administrator support, gender, and teacher age. At the school-level, demographic variables including urbanicity, percent

students qualifying for free/reduced lunch, and percent students of color also significantly predict teacher de-professionalization and demoralization.

Introduction

The *No Child Left Behind Act of 2001* (NCLB) solidified federal mandates of "high-stakes" state accountability systems and represents the height of more than three decades of broader accountability policy movement in the United States. Throughout the rise of accountability policy in the U.S. there has been a tension between the professional education paradigm which seeks professionalization of educators and the policymaker paradigm that seeks accountability for educational outcomes (Ravitch, 2002). The era of public education spanning the 1980s to present provides an opportunity for examining this tension. Coburn, Hill, and Spillane (2016) characterize instructional policymaking into three eras within the past three decades: the standards-based reforms of the 1980s and 1990s, the state-level accountability reforms of the late 1990s and 2000s, including implementation of the *Improving America's Schools Act of 1994* (IASA), and the modern post-NCLB era that combines elements of both. The issuing of *A Nation at Risk* (1983), catalyzed the policy move to link consequences to student test scores (Hamilton, Stecher, & Yuan, 2008). In 1989 George H.W. Bush convened the governors of all states for only the third time in U.S. history, and the topic was improving education (Meisler & Gerstenzang, 1989). Public education was consistently one of the largest budget items in every state, and governors were concerned with a lack of academic performance shown on standardized assessments such as the National Assessment of Educational Progress (NAEP), and wanted President Bush to provide a national platform for improving U.S. public education. The result of this conference was a call for national standards of

education performance. Following this conference, many states went to work developing academic standards for both content and performance and determining ways to measure student mastery of these standards. The *Improving America's Schools Act of 1994* in parallel with the *Goals 2000: Educate America Act* represented an attempt to create national systemic reform in public education that represented standards-based policy innovations at the state level (Coburn, Hill, & Spillane, 2016; Superfine, 2005). This legislation attempted to alleviate the tension between federal mandates for accountability linked to federal funding and state and local flexibility in implementation, however, this approach led to inconsistency in standards development and student assessment across states (Superfine, 2005). Although implementation was inconsistent, in the period from 1995 to 2000, the number of states that developed standards in English/Language Arts, Mathematics, Science, and Social Studies more than doubled, and, by 2000, 46 states issued annual accountability reports at the district level and 40 states issued these reports at the state level (Hurst, 2003). However, the number of states with coherent standards-assessment-incentive structures was far less than the policy architects of IASA and Goals 2000 envisioned (Hamilton, Stecher, & Yuan, 2008).

While many states required annual proficiency tests for students to assess school progress prior to its enactment, NCLB was the first piece of federal legislation to attach consequences to failure to meet required proficiency targets. These sanctions, such as school restructuring or takeover by government agencies, left many teachers and principals feeling pressured or even "threatened" to raise test scores (Daly, Der-Martirosian, Ong-Dean, Park & Wishard-Guerra, 2011; Olsen & Sexton, 2009). Teachers and principals who serve in schools which historically struggled with test scores prior to

NCLB mandates because of systemic underfunding, teacher turnover and shortages, among other intersecting social and economic issues, were particularly at risk of facing consequences which may have exacerbated the structural problems within this context (see Anagnostopoulos, 2003; Finnigan, 2010; West, Peck & Reitzug, 2010). NCLB dictated additional teacher qualifications, which changed teaching eligibility for those entering the field as well as those who had been teaching for several years (see Eppley, 2009; Manna & Petrilli, 2008; Rutledge, Harris & Ingle, 2010). In conjunction, the high-stakes around proficiency testing lead to many teachers narrowing their curriculum and drilling basic skills (Berliner, 2011; Schoen & Fusarelli, 2008). Altogether, the profession of teaching changed in work and morale with the implementation of NCLB (Berryhill, Linney & Fromewick, 2009; Valli & Buese, 2007).

In fact, without the appropriate supports and targets (see Hamilton, Stecher, Marsh, McCombs, Robyn, Russell, Naftel, & Barney, 2007), NCLB's end goal of 100 percent "proficiency" by 2014 proved impossible. Shortly after arguments over waivers, education legislation was reauthorized and enacted in 2015 with the *Every Student Succeeds Act* (ESSA). Leading up to ESSA, accountability systems expanded to include teacher evaluation with Race to the Top initiatives, and ESSA has maintained annual academic proficiency tests to measures progress. While these systems now include multiple indicators of academic progress, NCLB marked a prominent turning point in the teaching profession under federal policy where what was taught and who can teach was determined by student performance on achievement tests (see Berliner, 2011; Rutledge, Harris & Ingle, 2010; Valli & Buese, 2007). With new accountability policies that revise and expand the intentions of NCLB to track teacher and student proficiency, it is

important to understand how teacher perceptions about their profession may have changed before and after NCLB. Knowing this potential shift in teacher job perceptions around the time of this first federal accountability legislation would inform how to approach transitions into ESSA implementation.

Public policy evaluation has long recognized the importance of implementer perception on the achievement of policy outcomes (Lipsky, 2010; Pressman & Wildavsky, 1973). In the case of NCLB implementation, the policy presupposes that student achievement is linked to teacher performance, thus teachers are primary policy implementers (Hamilton et al., 2007; Milner, 2013). Teachers' perceptions of their working conditions have been shown to be important antecedents to distal outcomes including teacher turnover, and these perceptions can also affect more immediate work performance (Sutcher, Darling-Hammond, & Carver-Thomas, 2016; Kersaint et al., 2007; Loeb, Darling-Hammond, & Luczak, 2005; Shen, 1997). As primary policy implementers, school administrators and teachers can engage in practices that create adverse effects for achieving policy goals, which can include deflection of policy goals and resistance to policy control (Bardach, 1977; Diamond, 2012). Because school administrators are agents of policy coupling within schools, it is also important to determine how school leaders' actions can influence teacher perceptions of their job under policy constraints (Diamond, 2007, 2012; Spillane, Parise, & Sherer, 2011). The purpose of this study is to examine teacher perception of two theorized consequences of school accountability, de-professionalization and demoralization. Much of the current evaluation work of NCLB that discusses the concepts of teacher perception of de-professionalization and demoralization is based on small-scale qualitative and mixed methods work that has

been contextualized within localized schooling contexts. This study seeks to investigate these theories as unintended consequences of NCLB using large, nationally representative samples of teachers surveyed in the Schools and Staffing Surveys both before and following the implementation of NCLB. This approach will allow for a more generalizable description of teacher and school level predictors of teacher perception of de-professionalization and demoralization. To this end, this study examines the following research questions:

1. What teacher and school characteristics, including principal leadership, predict teacher perception of de-professionalization and demoralization during key time periods in accountability policymaking?
2. To what extent have teacher perceptions of de-professionalization and demoralization changed during key time periods in accountability policymaking?
3. What are the differences in the change of teacher perception of de-professionalization and demoralization during key time periods in accountability policymaking by school contexts with intersections of high/low percentages of students of color and eligibility for free or reduced priced lunch?

Accountability Policy and Teacher De-professionalization and Demoralization

Accountability is a broad policy term that generally includes any public policy that incentivizes student performance on standardized assessments; incentives can come in the form of either rewards or sanctions and may be issued at the school or teacher level (Figlio & Loeb, 2011). Accountability policies are rooted in a rational choice model of school reform, the assumption of which is that schools and teachers will rationally respond to rewards and/or sanctions by improving instructional and organizational

practices. Improvement in instructional and organizational practices will in turn produce improved student performance that can be measured as standardized academic outcomes (Diamond, 2012). An examination of the historical roots of the current environment of school accountability demonstrates that the intention of accountability is to improve academic outcomes and reduce achievement gaps for students of color and students living in poverty (Ravitch, 2002). However, an examination of how teachers and schools have responded to accountability policy indicates that these policies may have had unintended consequences for the teacher workforce (Benveniste, 1985, 1986; Darling-Hammond, 2007; Diamond, 2012; Ingersoll & Perda, 2009; Mausethagen, 2017; Valli & Buese, 2007; Von Der Embse et al., 2016). The unintended consequences of NCLB can be grouped into two main areas, the professional work of teachers and teacher morale.

Teacher De-professionalization of Curriculum and Instruction Work

Curriculum and instruction are the focus of the teacher technical core of work, and this technical core has been affected by federal accountability policy. On one hand, this effect is intended. The policy pressure applied by accountability assumes the value of quality instruction in improving academic outcomes and further assumes that teachers and schools will improve and innovate their practices in response to accountability (Milner, 2013; Vannest et al., 2009). Conversely, an unintended consequence of the accountability policy movement that is widely reported is the narrowing of curriculum and instructional practices to focus on subjects and standards measured by sanctionable tests. As early as 1988, Madaus (1988) predicted that as standardized tests became increasingly high-stakes, instruction and curriculum choices would be increasingly driven by the testing process. More recent research supports this prediction, relating NCLB's

emphasis on standardized testing in mathematics and English language arts to an increase in time spent teaching these subjects, often at the expense of time spent teaching non-tested subjects (Berliner, 2016; Cawelti, 2006; Darling-Hammond, 2007; Longo-Schmid, 2016). Additionally, instructional strategies may have become limited to test preparation activities, especially in schools that have been identified as failing (Baker et al., 2010; Malen & Rice, 2016; Mintrop & Sunderman, 2009). Finally, it has been reported that teachers' influence over curriculum and instructional practices, either actual or perceived, has diminished in the years following the passage of NCLB (Powell et al., 2009; Schoen & Fusarelli, 2008; Stillings, 2005).

The teacher de-professionalization construct that is examined in this study has two primary facets that are interrelated to each other: teacher and school quality have become linked to student performance on standardized assessments and, in response, curriculum and instruction has become narrowed and teacher autonomy in these areas minimized (Milner, 2013). NCLB's emphasis on standardized test scores in mathematics and reading as a measure of school and teacher performance has led to a narrowing of curriculum (Cawelti, 2006; Darling-Hammond, 2007; Dever & Carlston, 2009; Hursh, 2007; Powell, Higgins, Aram, & Freed, 2009). Schools labeled as failing under accountability systems tended to intensify effort towards short-term educational strategies, such as low-level test-preparation, that may save them from sanctions rather than helping students improve academically in the long-term, and this curriculum approach can exclude students from intellectually demanding learning that is available in less-pressured schools (Baker et al., 2010; Diamond, 2012; Malen & Rice, 2016; Mintrop & Sunderman, 2009). Teachers' influence over instructional practices also decreased in the era of school accountability

(Powell et al., 2009; Schoen & Fusarelli, 2008; Stillings, 2005). Teachers in at-risk schools feel pressure to exchange enriching practices such as culturally relevant pedagogy and inquiry-based learning in exchange for a homogenized culture of students as "an army of worksheet filler-outers" (Camp & Oesterreich, 2010). Teaching to the test often comes at the expense of time spent on more complex, far-reaching goals. Compromising the standards of good teaching and the ethic of the profession when striving to meet accountability goals can lead to teacher demoralization (Abrams, Pedulla, & Madaus, 2003).

Demoralization of Teachers

In addition to the effects of accountability policy on the professional work of teachers, the increasing performance pressure of accountability sanctions, which reached their height under NCLB, may have also had an unintended effect on teacher morale (Abrams, Pedulla, & Madaus, 2003; Baker et al., 2010). Performance pressure could result in improved performance, but if the pressure becomes overarching facet of the work of teachers, it can result in feelings of worry, stress, and burnout (Byrd-Blake et al., 2010; Dever & Carlston, 2009). An overt focus on achievement using a standardized test score criterion may also prevent teachers from teaching the whole child and may cause them to focus instructional efforts on students who may be able to pass the test, both practices that teachers find in conflict with an ethic of teaching (Byrd-Blake et al., 2010; Neal & Schanzenbach, 2010). Another theme that emerges from the existing assessment of NCLB's effect on teachers is that the policy failed to consider the existing disparities in schooling contexts, particularly the concentrated poverty present in many school communities (Darling-Hammond, 2007; Gerstl-pepin, 2006; Price, 2010). Teachers

working in high poverty communities can find themselves “between a rock and a hard place,” navigating an already challenging school context with the additional pressure of reducing already present achievement gaps (Eslinger, 2012). The accountability climate may have created a “dehumanizing” effect on the teacher workforce that stifles creativity and innovation, negatively affects teachers’ professional self-concept, and puts teachers in conflict with social justice narratives that call for an enriched educational experience for the most vulnerable student populations (Carter-Andrews, Bartell, & Richmond, 2016).

Demoralization is conceptualized as the inability of teachers to access the moral rewards of teaching (Santoro, 2011). Teachers are given the essentially moral charge to help students flourish but are also forced to engage in practices that they believe stunt students’ ability to flourish (Frank, 2016; Lopez, 2013; Santoro, 2016). There are three major facets of demoralization of teachers in the era of accountability policy. First, teachers must focus a larger portion of their time on administrative tasks related to accountability, second, teachers experience worry and stress related to accountability pressure, and third, teachers may have an increase in negative perceptions of students who consistently fail to perform at a proficient level on standardized tests.

In the era of NCLB implementation teachers time to work with students in a meaningful way is increasingly consumed with administrative tasks related to accountability (Bennett, Brown, Kirby-Smith, & Severson, 2013; Scheopner, 2010; Tidwell, 2014). Communities of teacher collaboration are focused on standardized test data, and next steps for increasing student achievement on standardized assessments (Wronowski, 2017). Time spent on accountability documentation detracts from what

teachers view as their "calling" in teaching, serving the best interests of students (Bennett, Brown, Kirby-Smith, & Severson, 2013). The accountability burden has also led teachers feel intense performance pressure (Abrams, Pedulla, & Madaus, 2003; Baker et al., 2010). This pressure can manifest itself in feelings of worry and stress, both for themselves and their students (Byrd-Blake et al., 2010; Dever & Carlston, 2009). Kohl (2003) describes the case of Rosa, a bilingual teacher who was, in response to accountability pressures, prevented from assisting students to learn English by communicating to them in their native Spanish language. Rosa describes a "deep depression" that "was tearing her apart" as she was becoming an "instrument of her students' humiliation" (p. 8). Santoro (2011) describes the feelings of worry and stress in her critical case study of Stephanie's experience as a teacher at a high poverty school who is teaching in the "difficult times" of NCLB. Stephanie describes the policies that "came down from above…that just got worse and worse and worse, and the pressure became so great that there was just no way around it" (p. 15). This worry and stress affects teachers' personal psychology and that psychology can be transferred to their students (Santoro, 2011).

Accountability policies may lead teachers to avoid working with students who are viewed as challenging. When schools serving large percentages of students of color living in poverty are additionally labeled as failing, the perception that factors external to schooling, such as race, poverty, apathy, and parental involvement, cannot be overcome leads expert teachers to avoid such schools (Amrein-Beardsley, 2012, Darling-Hammond, 2007, Heilig, Khalifa, & Tillman, 2014). Although accountability pressures from may affect teachers by creating conditions of both de-professionalization and demoralization,

previous empirical work demonstrates that these effects may be moderated by school contextual factors including principal leadership.

Contextual Factors and Teacher De-professionalization and Demoralization

Performance on standardized tests is largely predicted by background factors, like student socioeconomic status, with students living in poverty performing increasingly worse than their middle- to upper-middle class peers across the last five decades (Berends, 2014). As documented in The Coleman Report, the poverty and racial gaps in educational outcomes were already concentrated in specific schooling contexts well before the school accountability reform movement took hold in the United States (Cannon, 1985; Ravitch, 2002). Therefore, it should not be surprising that urban schools that also serve large percentages of students of color and poverty are more likely to be labeled as "failing" in accountability systems (Darling-Hammond, 2007; Hursh, 2007). Thus, while race and poverty do not measure the structural issues that cause these gaps based on opportunity (see Carter & Welner, 2013), school level demographic factors can be considered predictors of the level of external policy pressures experienced by teachers. Urban, high-needs schools are more likely to face sanctions such as school restructuring or school takeover and, in turn, have teachers who possibly experience more de-professionalization and demoralization compared to other contexts (Adams & Adams, 2003; Malen & Rice, 2016).

Teachers' background and qualifications influence the ways in which they are able to navigate these pressures and broker changes in how to approach curriculum and instruction to meet proficiency requirements. Based on their certification and experience, teachers feel more or less prepared to teach, which coincides with their perceived

influence over curriculum and instruction, and the overall morale around their work and students (Pas, Bradshaw & Hershfeldt, 2012; Smith, Desimone & Ueno, 2005). Further, this professional background intersects with a teacher's race and gender. A teacher's capacity to teach and how they may view their own background in relationship to others partly describes the extent to which a teacher may be socio-culturally conscious while understanding how to build instruction to help learners from diverse backgrounds construct knowledge (Ladson-Billings, 1995; Villegas & Lucas, 2002). Teacher experience, certification type, age, race and gender contribute to their perceptions work and morale (Ingersoll, Alsalam, Quinn & Bobbitt, 1997; Klassen & Chiu, 2010)

Principal leadership supports teachers in how they approach their work and morale (e.g. Blase & Blase, 2000; Finnigan, 2010; Marks & Louis, 1999; Wahlstrom & Louis, 2008). This leadership support for teachers is particularly important in contexts where a leader may need to filter external pressures from surrounding policy (Daly, 2009; Diamond, 2012; Honig & Hatch, 2004; Rutledge, Harris & Ingle, 2010). In the body of research on leadership for school improvement, managerial, instructional and shared leadership have been found to relate to outcomes for teachers and students (Grissom & Loeb, 2011; Robinson, Lloyd & Rowe, 2008; Urick & Bowers, 2014; Urick, 2016a; 2016b). With arguments in the research literature on the need to improve schools through leadership beginning in the 1980's (e.g. Edmonds, 1979), and the rise of accountability policy, the role of principals as managers extended to that of an instructional leader. These managerial operations included budgets, safety, order and the overseeing of human resources, such as hiring and formal documentation (see Grissom & Loeb, 2011; Urick, 2016a; 2016b). While these tasks are somewhat tangential to academics, the management

of resources and order are foundational to the support of teachers and learning (Urick, 2016b). Cuban (1988) argued that both managerial and instructional leadership were necessary for principals to balance the needs of their given school context (see also Hallinger, 2005). Following the rise of school improvement discussions and instructional leadership, around the time of NCLB, U.S. schools were at the height of restructuring to share leadership with teachers (see Leithwood, 1994; Marks & Printy, 2003; Muijs & Harris, 2003). Principals who provided teachers influence over instruction and operations shared the decision-making duties and incorporated teacher instructional expertise while at the same time increasing morale, the meaning of their work, and general outcomes for both teachers and students (Urick, 2016a; 2016b; Marks & Louis, 1999; Marks & Printy, 2003). Principal leadership is important for how a school navigates pressures to continue to support the practice of teachers (Diamond, 2012).

In summary, the increasing focus on the reward and sanction mechanism of accountability policies sought to tightly couple the work of teachers with outcomes on standardized assessments. Because the primary measure of academic achievement was standardized test performance, increasing test scores became the focus of curriculum and instructional practices. In this way accountability policies created an inherent tension between teachers' professional autonomy and the need for schools and teachers to make adequate progress (Au, 2011). Additionally, case studies have described the tension teachers have between trying to meet NCLB demands while at the same time educating children in a holistic way, and this tension can ultimately affect their personal psychology (Santoro, 2011). We describe these related tensions as teacher perceptions of de-professionalization and demoralization, and this study aims to identify teacher- and

school-level predictors of teacher perceptions of de-professionalization throughout the rise of accountability policies from the 1990s through the late 2000s.

Method

Sample

This study is a secondary analysis of the data from the National Center Education Statistics (NCES) Schools and Staffing Survey (SASS) across the 1993-1994, 1999-2000, 2003-2004 and 2007-2008 administrations. The SASS data are appropriate for this study because the surveys provide a rich description of teacher perception of working conditions which corresponded with this study's theorized constructs of de-professionalization and demoralization. SASS includes measures of principal perception of leadership within schools and a range of teacher and school level demographic data. The sampling procedures of SASS follow a two-stage, clustered design that is stratified at both the school and teacher levels which yields a nationally representative sample of schools and teachers for the year of administration (Tourkin et al., 2010). For the first stage, schools are selected using the Common Core of Data (CCD) following a stratified sampling frame. For the second stage, up to twenty teachers, with an average between three and eight, were selected per school to participate. School and teacher sample weights (SFNLWGT, TFNLWGT) are provided to adjust the sample estimates to represent the framed target population (Tourkin et al., 2010). NCES has applied a multi-stage imputation procedure to address missing data at all levels for SASS data. The public-school samples for the SASS administrations included (93-94, 99-00, 03-04, 07-08) in the study range from ~N = 8,970 – 10,200 schools and ~N = 46,710 – 56,350

teachers. This study compares nationally representative samples of schools and teachers across four SASS administrations, two prior and two since the implementation of NCLB.

Variables

De-professionalization. De-professionalization has two features, lack of teacher influence over curriculum and instruction, that are predicted to increase throughout the accountability policy era since classroom teaching was narrowed to attain student proficiency on basic achievement tests (Cawelti, 2006; Darling-Hammond, 2007; Dever & Carlston, 2009; Hursh, 2007; Malen & Rice, 2016; Milner, 2012; Mintrop & Sunderman, 2009; Powell, Higgins, Aram, & Freed, 2009; Williamson & Morgan, 2009). SASS items that were included in the teacher de-professionalization composite are listed in Table 1.1 for each year of administration. All items were standardized, and a composite teacher perception of de-professionalization variable was calculated as the mean of the standardized items for each year.

Table 1.1

SASS Items Included in the Teacher Perception of De-professionalization Construct

Question	**1993-1994 (α = 0.77)**	**1999-2000 (α = 0.77)**	**2003-2004 (α = 0.76)**	**2007-2008 (α = 0.75)**
Original Scale of Items	*(0 = No Control/influence; 5 = Complete Control- reverse coded)*	*(1 = No control/influence; 5 = A Great Deal of Control)/influence Reverse Coded*	*(1 = No control/influence; 4= A Great Deal of Control)/influence Reverse Coded*	*(1 = No control/influence; 4= A Great Deal of Control)/influence Reverse Coded*
		(Lack of) Influence over Curriculum		
Selecting textbooks and instructional materials	T1045	T0293	T0318	T0280
Selecting content to be taught	T1050	T0294	T0319	T0281
Establishing curriculum	T1040	T0287	T0312	
		(Lack of) Influence over Instruction		
Selecting teaching techniques	T1055	T0295	T0320	T0282
Evaluating and grading students	T1060	T0296	T0321	T0283
Determining the amount of homework to be assigned	T1070	T0298	T0323	T0285

Demoralization. Demoralization is conceptualized as the inability of teachers to access the moral rewards of teaching (Santoro, 2011). There are three major facets of demoralization of teachers in the era of accountability policy: a) teachers must focus a larger portion of their time on administrative tasks related to accountability, b) teachers experience worry and stress related to accountability pressure, and c) teachers may have an increase in negative perceptions of students who consistently fail to perform at a proficient level on standardized tests (Abrams, Pedulla, & Madaus, 2003; Baker, et al., 2010; Byrd-Blake et al., 2010; Bennett, Brown, Kirby-Smith, & Severson, 2013; Dever

& Carlston, 2009; Frank, 2016; Lopez, 2013; Santoro, 2011, 2016; Scheopner, 2010; Tidwell, 2014; Wronowski, 2017). SASS items that measure teacher perception of demoralization are listed in Table 1.2. All items were standardized, and a composite variable of teacher perception of demoralization was calculated using a mean of the standardized items for each year.

Table 1.2

SASS Items Included in the Teacher Perception of Demoralization Construct

Question	**1993-1994 (α = 0.78)**	**1999-2000 (α = 0.78)**	**2003-2004 (α = 0.83)**	**2007-2008 (α = 0.82)**
Paperwork Burden (1 = Strongly Disagree, 4 = Strongly Agree)				
Routine duties and paperwork interfere with my job of teaching	T1240	T0305	T0336	T0291
Negative Perception of Students (1 = Not a Problem, 4 = Serious Problem)				
Students dropping out	T1140	T0333	T0369	T0307
Student apathy	T1145	T0334	T0370	T0308
Lack of parent involvement	T1155	T0335	T0371	T0309
Poverty	T1165	T0336	T0372	T0310
Students come to school unprepared to learn	T1175	T0337	T0373	T0311
Poor student health	T1185	T0338	T0374	T0312
Worry and Stress (1= Strongly Disagree, 4= Strongly Agree)				
I worry about the security of my job because of the performance of my students on state or local tests		T0313	T0343	T0298
The stress and disappointments involved with teaching at this school aren't really worth it.			T0375	T0313
If I could get a higher paying job, I'd leave teaching as soon as possible			T0378	T0316
I think about transferring to another school			T0379	T0317
I don't seem to have as much enthusiasm now as when I began teaching			T0380	T0318
I think about staying home from school because I'm just too tired to go			T0381	T0319
I sometimes feel it is a waste of time to try to do my best as a teacher	T1305	T0318	T0349	
If you could go back to your college days and start over, would you become a teacher or not (1 = certainly would become a teacher; 5 = certainly would not become a teacher)	T1320	T0339		T0320
I have to follow rules in this school that conflict with my best professional judgement	T1280	-	-	-

School variables. Three school level variables, urbanicity, percent students of color, and principal leadership, were included in the main analysis. The SASS questionnaires classify schools and districts using an urban-centric locale code (Tourkin et al., 2010). For the HLM models, this geographic variable, URBAND12, was dummy-coded into urban, suburban, and rural with suburban schools as the reference group. For percent of students of color, an examination of the histograms of the percent racial/ethnic minority variable, MINENR, showed that the variable was bi-modal with large peaks occurring between 0-10% racial/ethnic minority and 90-100% racial/ethnic minority students. The MINENR variable was dummy-coded into 0-10% and 90-100% with 11-89% students as the reference group. Percent of students qualifying for free and reduced lunch (NSLAPP_S) was used as a proxy measure for school poverty rate. These school demographic variables were selected to test the hypothesis that urban schools who serve large numbers of students of color and poverty may face higher accountability policy pressure because poverty has been frequently linked to academic performance. However, keeping these as separate variables does not fully capture the concentrated, racialized poverty of high-needs schools described in the literature (Dixson, Royal, & Henry, 2014; Nieto, 2003; Noguera, 2003; Obiakor & Beachum, 2005). To address this concern, a school type variable was created to compare schools with high and low intersections of percent poverty and percent students of color in a subsequent analysis. High percent poverty and low percent poverty were defined using the federal Title I definition of "highest poverty schools" with a free/reduced lunch rate of greater than 75% and lowest poverty schools with a free/reduced lunch rate of less than 25%. Principal leadership is comprised of three approaches, managerial leadership, instructional leadership, and

shared leadership (Urick & Bowers, 2014; Urick, 2016a; 2016b; Grissom & Loeb, 2011; Hallinger, 2003; 2005; Hallinger & Heck, 2010). These leadership approaches are measured using principal perception of their own behavior (refer to Urick & Bowers, 2014 and Urick, 2016a) from the administrator questionnaires (see Table 1.3). Descriptive statistics of both teacher and school variables included in the main analysis are shown in Table 1.4.

Table 1.3

SASS Items Included in the Principal Leadership Composite Variables

Question	1993-1994	1999-2000	2003-2004	2007-2008
Original Scale of Items	0 = No influence, 5 = A great deal of influence	1 = No influence; 5 = A great deal of influence	1 = No influence; 4 = A great deal of influence	1 = No influence; 4 = Major influence
		Managerial Leadership		
Principal influence over setting discipline policy	A765	A0118	A0098	A0082
Principal influence over hiring new teachers	A735	A0111	A0091	A0075
Principal influence over evaluating teachers	A860	A0104	A0084	A0068
Principal influence deciding how the school budget will be spent	A795	A0125	A0105	A0089
		Shared Leadership		
Teacher influence over setting discipline policy	A770	A0119	A0099	A0083
Teacher influence over setting performance standards for students		A0081	A0063	A0047
Teacher influence over establishing curriculum	A700	A089	A0070	A0054
Teacher influence over determining the content of professional development	A0835	A0097	A0077	A0061
Professional development is planned by teachers (1 = Never; 5 = Always)		A0160	A0131	A0113
Professional development is presented by teachers (1 = Never; 5 = Always)		A0161	A0132	A0114
		Instructional Leadership		
Principal influence over setting performance standards for students		A0079	A0062	A0046
Principal influence over setting establishing curriculum	A695	A0087	A0069	A0053
Principal influence over setting determining the content of professional development activities	A830	A0095	A0076	A0060
Professional Development is chosen to support the school's improvement goals (1 = Never; 5 = Always)		A0154	A0125	A0108

Teacher variables. Teacher age teaching experience, teacher race/ethnicity, gender, and teacher certification type were included as teacher demographic variables (Ingersoll, et al, 1997; Klassen & Chiu, 2010; Ladson-Billings, 1995; Pas, Bradshaw & Hershfeldt, 2012; Smith, Desimone & Ueno, 2005; Villegas & Lucas, 2002). Teacher age was standardized in each SASS year data set. Categorical dummy-coded variables for teacher experience (Early Career = 0-5 years experience, Mid-career = 6-15 years experience, Late Career = > 15 years experience) were created from the continuous SASS TOTEXPER variable in each data set (Table 1.4). Dichotomous variables were also created for teacher race, gender, and certification type where white teacher race/ethnicity = 0, non-white teacher race/ethnicity = 1, male gender = 0, female gender = 1, and regular certification = 0, and alternative certification = 1, respectively. A response was coded as alternative certification if the teacher responded that they had any certification other than a regular or advanced certification. Finally, a single SASS public teacher survey item, "The school administration's behavior toward the staff is supportive and encouraging," was included as a measure of teacher perception of school administrator support (Daly, 2009; Diamond, 2012; Honig & Hatch, 2004; Rutledge, Harris & Ingle, 2010). This item is included in the 93/94, 99/00, 03/04, and 07/08 surveys as item 1205, T0300, T0331, and T0286, respectively with the consistent scale of 1 = "Strongly Agree," 4 = "Strongly Disagree."

Table 1.4

Descriptive Statistics of Teacher and School Context Variables Included in HLM Models

Variables	**1993-1994 (n = 29,130)**				**1999-2000 (n = 23,430)**				**2003-2004 (n = 27,070)**				**2007-2008 (n = 22,480)**			
	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD
Teacher Level																
Teacher of Color	0	1	0.14	0.35	0	1	0.15	0.36	0	1	0.15	0.36	0	1	0.12	0.32
Teacher Age	-2.13	4.47	0.03	0.92	-1.36	4.23	0.06	1.01	-2.05	4.75	-0.00	1.03	-2.14	3.71	-0.01	1.10
Female	0	1	0.61	0.49	0	1	0.63	0.48	0	1	0.64	0.48	0	1	0.65	0.48
Other certification	0	1	0.09	0.29	0	1	0.07	0.26	0	1	0.12	0.33	0	1	0.12	0.32
Early Career (0-5 Years)	0	1	0.24	0.43	0	1	0.28	0.45	0	1	0.30	0.46	0	1	0.32	0.47
Late Career (>15 years)	0	1	0.47	0.50	0	1	0.33	0.47	0	1	0.41	0.49	0	1	0.35	0.48
Perceives that administration is not supportive	1	4	1.89	0.90	1	4	1.90	0.92	1	4	1.68	0.84	1	4	1.61	0.80
Teacher Perception of De-professionalization	-1	3.38	-0.02	0.64	-1.13	2.82	-0.13	0.60	-0.91	3.22	-0.03	0.62	-0.73	3.41	-0.07	0.66
Teacher Perception of Demoralization	-1.53	1.78	0.05	0.56	-1.32	1.94	0.12	0.56	-1.3	2.11	0.03	0.54	-1.24	2	0.02	0.54
School Level																
Urban	0	1	0.23	0.42	0	1	0.23	0.42	0	1	0.25	0.43	0	1	0.21	0.41
Rural	0	1	0.50	0.50	0	1	0.37	0.48	0	1	0.30	0.46	0	1	0.44	0.50
0-10% students of color	0	1	0.47	0.50	0	1	0.43	0.50	0	1	0.37	0.48	0	1	0.37	0.48
90-100% students of color	0	1	0.08	0.27	0	1	0.09	0.28	0	1	0.09	0.29	0	1	0.07	0.26
Percent of Students Qualifying for FRLP	0	100	34.61	26.62	0	100	33.98	26.49	0	100	36.99	26.08	0	100	37.43	24.49
Managerial Leadership	-4.78	0.68	0.04	0.67	-5.11	0.60	0.03	0.67	-5.12	0.39	0.03	0.61	-5.36	0.35	0.01	0.61
Shared Leadership	-3.44	1	0.03	0.75	-3.30	1.23	0.01	0.64	-2.41	1.22	0.00	0.55	-3.42	1.16	-0.00	0.61
Instructional Leadership	-3.27	1.13	0.02	0.81	-2.66	1.18	-0.02	0.61	-2.81	0.86	0.01	0.66	-3.18	0.77	-0.00	0.63

Analytic Procedure

Multigroup hierarchical linear modeling (HLM) was conducted in Mplus 8 using MLR estimation (Heck & Thomas, 2015; Muthén & Muthén, 1998-2017). Overall, HLM allows for the examination of theory about social processes that occur across individuals and between their social groupings by statically accounting for the nested nature of teachers nested within schools (Heck, Thomas, & Tabata, 2014; Raudenbush & Bryk, 1986). In this study, multiple groups were used as a structure to represent a time series design since SASS data are cross-sectional, nationally representative samples which repeat over time. Multi-group HLM produces estimates for each time point, or group, that can be compared in subsequent analyses to predict changes in teacher de-professionalization and demoralization in years preceding and following NCLB implementation.

Two separate models were created using teacher perception of de-professionalization and demoralization as dependent variables, and each of these models included a comparison of four groups: 1994, 2000, 2004, and 2008. The equations for the HLM analysis using teacher de-professionalization (DEPROF) and demoralization (DEMORAL) are given below where individual teachers (*i*) are clustered within schools (*j*), and all teacher-level variable and covariate slopes are treated as fixed ($\beta_{nj} = \gamma_{n0}$) (see Raudenbush & Bryk, 2002).

Teacher-level fixed equations (level one):

$$Y_{DEPROF} = \beta_{0j} + \beta_1 NONWHITE_{ij} + \beta_2 AGE_{ij} + \beta_3 FEMALE_{ij} + \beta_4 ALTCERT_{ij} + \beta_5 EARLYCAREER_{ij} + \beta_6 LATECAREER_{ij} + \beta_7 NEGADMINSUP_{ij} + \beta_8 DEMORAL_{ij} + \varepsilon_{ij}$$

$$Y_{DEMORAL} = \beta_{0j} + \beta_1 NONWHITE_{ij} + \beta_2 AGE_{ij} + \beta_3 FEMALE_{ij} + \beta_4 ALTCERT_{ij} + \beta_5 EARLYCAREER_{ij} + \beta_6 LATECAREER_{ij} + \beta_7 NEGADMINSUP_{ij} + \beta_8 DEPROF_{ij} + \varepsilon_{ij}$$

School-level fixed effects equations (level two):

$$\beta_{0\text{DEPROFj}} = \gamma_{00} + \gamma_{01}\text{URBAN}_j + \gamma_{01}\text{RURAL}_j + \gamma_{02}\text{STUDCOLOR0}_j + \gamma_{03}\text{STUDCOLOR100}_j + \gamma_{04}\text{FRLP}_j + \gamma_{05}\text{MANGLEAD}_j + \gamma_{06}\text{SHAREDLEAD}_j + \gamma_{07}\text{INSTRUCT}_j + r_{0j}$$

$$\beta_{0\text{DEMORALj}} = \gamma_{00} + \gamma_{01}\text{URBAN}_j + \gamma_{01}\text{RURAL}_j + \gamma_{02}\text{STUDCOLOR0}_j + \gamma_{03}\text{STUDCOLOR100}_j + \gamma_{04}\text{FRLP}_j + \gamma_{05}\text{MANGLEAD}_j + \gamma_{06}\text{SHAREDLEAD}_j + \gamma_{07}\text{INSTRUCT}_j + r_{0j}$$

Following the multigroup HLM, a series of subsequent analyses answered research questions on the comparison of time. First, we conducted a post hoc test of equality of unstandardized regression coefficients of teacher and school level variables (see Paternoster et al., 1998). Second, the multigroup HLM yielded a form of posterior probability, more specifically, a loglikelihood of displacement (LLD, see Cook & Weisberg, 1982). The LLD values incorporate a measure of model fit and degree of variance explained with all parameters included, thus providing a measure of model difference across teachers and between schools. We used a t-test with equal variance not assumed to compare teacher level and school level LLD estimates for 2000 and 2004, the years immediately prior and after NCLB implementation. Finally, to determine how teachers' perception of de-professionalization and demoralization changed across time in different school types, a one-way ANOVA was applied to determine if there were differences in teacher perception of de-professionalization and demoralization between schools with intersections of high/low free/reduced lunch eligibility and high/low percentages of students of color.

Results

Teacher Demoralization

The effect of teacher and school variables on teacher perceptions of demoralization was examined using multigroup HLM. Prior to adding any predictors to the model, intraclass

correlation (ICCs) were calculated to determine if a significant amount of variance in teacher demoralization was present at the school level in each of the SASS administrations used in this study. ICC values indicate that 48% (1994), 49% (2000), 42% (2004), and 45% (2008) of the variance in teacher perception demoralization can be explained for each of the SASS administrations. These ICCs represent more than twice as much variance explained at the school level compared to the norm for student achievement which is around 20%. Teacher and school level variables were entered in stepwise models with model one containing only teacher variables and model two containing teacher and school variables (see Table 1.5 for results; and Figure 1.1 for a graph of standardized coefficients). Overall, when comparing the loglikelihood of displacement an estimate of influence of each case as a product of the HLM, there was a significant increase in school- and teacher-level LLD estimates between 1994, the first analysis year, and 2008, the last analysis year. However, the only significant increase in teacher perception of demoralization at the teacher- and school-levels between individual analysis years occurred between 2000 and 2004, which represents the transition from the primarily state-level accountability of IASA to the federal-level accountability of NCLB. Across both teacher and school level results in model two, there were predictors which were consistently significant across all survey years. Teachers who had increased perceptions of unsupportive administration (β = .29-.39, $p < .001$) or de-professionalization (β = .19-.27, $p < .001$) had a corresponding increase in demoralization. While teachers who perceive that administration is not supportive was consistently significant across years, there was an increase in the magnitude of the effect between 2000 (β = .29) and 2004 (β = .39) which are the years immediately prior and

following NCLB implementation (Z = 2.92, $p < .01$). De-professionalization did not have changes in the size of effect on demoralization across the years. Further, rural schools (β = .08-.22, $p < .01$-$.001$) and schools with higher percentages of students receiving free or reduced priced lunch (β = .18-.45, $p < .001$) also had increased perceptions of teacher demoralization. Rural schools had a significant decrease in its influence on demoralization from 2004 (β = .14) to 2008 (β = .08) which showed that this location was not as strong of a predictor, compared to suburban schools, after a few years of NCLB implementation (Z = -2.01, $p < .05$). However, for schools with higher percentages of free and reduced priced lunch students, there was a significant increase in regression coefficient from 1994 to 2000 (Z = 3.29, $p < .001$) and another significant increase between 2004 and 2008 (Z = 3.79, $p < .001$). These time periods represent the standards-based reform movement under IASA and the increase in federal accountability policy following the height of NCLB implementation.

Some teacher and school variables had inconsistent results on demoralization throughout the accountability policy periods. Teachers of color, compared to white teachers (β = -.08, $p < .01$, 1994), and teacher age (β = -.06-.07, $p < .05$, 1994 & 2000) had a significant, inverse relationship with demoralization during the period representing the state-level accountability policy era under IASA, but were not significant predictors in the NCLB implementation period. We found similar results with older teachers, compared to younger teachers. These effects did not have significant changes in coefficients across years. Conversely, in the 2004 administration year, immediately after NCLB implementation, early career teachers, compared to mid-career teachers, had decreased demoralization (β = -.12, $p < .01$), but any changes in the effects across years

were also not significant. Moving to school variables, interestingly, shared leadership had an inverse effect on teacher demoralization in both the standards-based reform era (β = -.06, $p < .05$; 2000), and immediately following (β = -.10, $p < .05$; 2004) NCLB implementation. These years corresponded with a time span at the height of reforms to restructure schools towards teacher influence, and this shared leadership was found to significantly decrease teacher demoralization in schools around the same time of NCLB implementation. However, changes in the coefficients of shared leadership on demoralization were not significant across years. There were some significant changes in coefficients for urban locations. An urban location, compared to suburban, was a significant positive predictor of demoralization in 1994 and 2000 (β = .10-.13, $p < .001$), but urban school classification, compared to suburban school classification, was no longer a significant predictor of teacher demoralization after NCLB implementation, and this change in regression coefficient was significant (Z = -2.02, $p < .05$). Additionally, schools with 0-10% students of color, compared to 11-89%, had an inverse influence on teacher perceptions of demoralization from 1994 to 2004 (β = -.19- -.07, $p < .001$), however this influence significantly decreased during this time period (Z = 3.29, p < .05), and the influence of this predictor was no longer significant by 2008. Schools with 90-100% students of color, compared to 11-89%, reported more teacher demoralization in 1994 (β = .09, $p < .001$), the year that IASA was passed, however, the regression coefficient significantly decreased from 1994 to 2000. This school demographic was also a significant positive predictor of demoralization immediately following NCLB implementation in 2004 (β = .07, $p < .05$), however, the coefficient did not significantly change from 2004 to 2008. The extent that teacher race, age, experience, an urban

location, and the number of students of color were associated with perceptions of demoralization fluctuated in the years before and after NCLB implementation. The changes in demoralization standardized regression coefficients for teacher and school level variables across SASS administrations are visualized in Figure 1.1.

Table 1.5

Two-Level Hierarchical Linear Model of Teacher Perception of Demoralization

	1993-1994		**1999-2000**		**2003-2004**		**2007-2008**	
	Model One	Model Two	Model One	Model Two	Model One	Model Two	Model One	Model Two
	β (SE)	*β (SE)*	*β (SE)*	*β (SE)*	*β (SE)*	*β (SE)*	*β (SE)*	*β (SE)*
Intercept	-0.29(.03)***	-1.13(0.10)***	-0.19(0.03)***	-1.00(0.08)***	-0.35(0.05)***	-1.55(0.15)***	-0.39(0.03)***	-1.82(0.11)***
Teachers of Color	-0.08(0.03)**	-0.08(0.03)**	-0.05(0.03)	-0.05(0.03)	-0.06(0.03)~	-0.06(0.03)~	-0.03(0.04)	-0.02(0.03)
Teacher Age	-0.03(0.01)*	-0.06(0.03)*	-0.03(0.01)*	-0.07(0.03)*	-0.03(0.02)~	-0.07(0.04)~	-0.69(0.04)	0.01(0.04)
Female	-0.01(0.02)	-0.01(0.02)	0.02(0.02)	0.02(0.02)	0.01(0.02)	0.01(0.02)	0.03(0.02)	0.03(0.02)
Other certification	-0.04(0.04)	-0.03(0.03)	-0.05(0.03)	-0.03(0.02)	0.00(0.04)	0.00(0.03)	-0.03(0.03)	-0.02(0.02)
Early Career (0-5 Years)	-0.04(0.03)~	-0.05(0.03)~	-0.04(0.03)	-0.04(0.03)	-0.12(0.04)**	-0.12(0.04)**	-0.04(0.03)	-0.04(0.03)
Late Career (>15 years)	0.01(0.03)	0.01(0.03)	0.01(0.02)	0.02(0.03)	0.01(0.04)	0.01(0.03)	-0.01(0.03)	-0.01(0.03)
Perceives that administration is not supportive	0.16(0.01)***	0.34(0.02)***	0.13(0.01)***	0.29(0.02)***	0.20(0.02)***	0.39(0.04)***	0.21(0.01)***	0.39(0.02)***
Teacher Perception of De-professionalization	0.14(0.02)***	0.24(0.03)***	0.17(0.02)***	0.27(0.02)***	0.15(0.02)***	0.22(0.03)***	0.11(0.02)***	0.19(0.03)***
Urban		0.13(0.03)***		0.10(0.03)***		0.02(0.03)		0.03(0.03)
Rural		0.22(0.03)***		0.20(0.02)***		0.14(0.03)***		0.08(0.03)**
0-10% students of color		-0.19(0.03)***		-0.10(0.03)***		-0.07(0.03)**		-0.05(0.03)~
90-100% students of color		0.09(0.03)***		0.01(0.03)		0.07(0.04)*		0.01(0.03)
Percent Student Qualifying for FRLP		0.18(0.03)***		0.30(0.03)***		0.32(0.03)***		0.45(0.03)***
Managerial Leadership		0.03(0.03)		0.04(0.03)		-0.00(0.03)		0.01(0.03)
Shared Leadership		-0.06(0.03)~		-0.06(0.03)*		-0.10(0.03)***		-0.04(0.03)~
Instructional Leadership		-0.04(0.03)		-0.02(0.03)		-0.01(0.03)		-0.02(0.03)
r^2	0.23(0.02)***	0.16(0.02)***	0.20(0.02)***	0.18(0.02)***	0.26(0.03)***	0.19(0.02)***	0.22(0.02)***	0.23(0.02)***
-2LL (all groups)	74088539.7	74066029.8						
AIC (all groups)	74088627.7	74066181.8						
Teacher Level Variance Explained	17%	17%	14%	14%	20%	20%	16%	16%
School Level Variance Explained	8%	22%	5%	22%	12%	29%	11%	32%
% Variance at the School Level	48%		49%		42%		45%	

Teacher De-professionalization

Teacher perception of de-professionalization was explained by 28% (1994), 32% (2000), 38% (2004), and 29% (2008), variance at the school level, which is also higher than what is expected for achievement (20%) but a little less than what was found for demoralization (refer to Table 1.6 for results; and Figure 1.1 for graphed standardized coefficients). As an overall analysis of changes in de-professionalization with all predictors included, estimates of influence for cases, or a log likelihood of displacement, LLD, was compared. Teacher perception of de-professionalization at both the teacher- and school-levels was significantly higher in 2008, the end of the study range, compared to 1994, the beginning of the study range. However, like the results for teacher perception of demoralization, the only significant difference in teacher de-professionalization between incremental time periods was an increase in teacher perception of de-professionalization at the teacher- and school-levels from 2000 to 2004.

Some teacher and school variables in the model were consistently significant across both the state-level accountability period of IASA and the federal-level accountability period of NCLB. The perception of administration as unsupportive (β = .14-.30, $p < .001$), demoralization (β = .24-.30, $p < .001$), a rural location (β = -.16-.22, $p < .001$) and schools with 0-10% students of color (β = -.11-.15, $p < .001$) were predictors of teacher perception of de-professionalization across all years. Whereas unsupportive administration and demoralization increase demoralization, a rural location and a school with a low percentage of non-white students was associated with less demoralization. Interestingly, while a rural location predicted an increase in demoralization in the results above, this finding was the opposite for de-

professionalization, which it influences a decrease in de-professionalization. A rural location was the only predictor of these with a significant change in coefficients across the years with a drop in its inverse relationship with de-professionalization, compared to suburban schools, from 2004 (β = -.23) to 2008 (β = -.16), after a couple years of NCLB implementation (Z = 2.30, $p < .05$).

Some teacher and school variables were inconsistent predictors across accountability policy eras. Teacher age (β = .14, $p < .001$), non-traditional/other certification (β = .05-.06, $p < .01$-$.05$), shared leadership (β = -.08-.20, $p < .001$-$.01$) and instructional leadership (β = .06-.10, $p < .01$-$.05$) were significant predictors on de-professionalization during the state-level accountability period from 1994 to 2000, but these findings disappeared following NCLB implementation. In fact, teacher age (Z = -2.90, $p < .01$) and instructional leadership (Z = -2.18, $p < .05$) had significant coefficient changes from 2000 to 2004, the years of transition from the state-level accountability of IASA to NCLB. For instance, an older age no longer predicted increased de-professionalization perceptions after NCLB, and instructional leadership was no longer related to increased de-professionalization after NCLB. There were a few findings which were significant after NCLB, rather than before. Most notably, urban locations (β = .12, $p < .001$) and schools with more students receiving free or reduced priced lunch (β = .09, $p < .05$) were associated with increase de-professionalization in the SASS administration year, 2004, immediately following NCLB implementation. Finally, although being a female teacher was associated with reduced de-professionalization in 2000 (β = -.07, $p < .01$), by 2008, after a several years of NCLB, being a female predicted increase de-professionalization (β = .06, $p < .01$). Teacher gender, an urban location and more

students with free and reduced priced lunch predicted increases in de-professionalization after NCLB implementation. These changes in de-professionalization standardized regression coefficients for teacher and school level variables across SASS administrations are shown in Figure 1.1.

Table 1.6

Two-Level Hierarchical Linear Model of Teacher Perception of De-professionalization

	1993-1994		**1999-2000**		**2003-2004**		**2007-2008**	
	Model One	Model Two	Model One	Model Two	Model One	Model Two	Model One	Model Two
	β (SE)	*β (SE)*	*β (SE)*	*β (SE)*	*β (SE)*	*β (SE)*	*β (SE)*	*β (SE)*
Intercept	-0.92(0.16)***	-0.62(0.17)***	-0.76(0.12)***	-0.54(0.13)***	-0.36(0.10)***	-0.35(0.12)**	-0.70**(0.14)	-0.48(0.15)***
Teachers of Color	-0.02(0.03)	-0.02(0.03)	-0.03(0.03)	-0.04(0.03)	0.01(0.04)	0.01(0.04)	-0.04(0.04)	-0.04(0.04)
Teacher Age	0.14(0.03)***	0.14(0.03)***	0.14(0.03)***	0.14(0.03)***	0.01(0.04)	0.01(0.04)	-0.04(0.04)	-0.04(0.04)
Female	-0.01(0.02)	-0.01(0.02)	-0.07(0.03)**	-0.07(0.03)**	-0.03(0.02)	-0.03(0.02)	0.06(0.02)**	0.06(0.02)**
Other certification	0.06(0.02)**	0.06(0.02)**	0.05(0.03)*	0.05(0.03)*	0.07(0.03)	0.01(0.03)	0.03(0.03)	0.03(0.03)
Early Career (0-5 Years)	0.06(0.03)*	0.06(0.03)*	0.02(0.03)	0.02(0.03)	0.03(0.03)	0.03(0.03)	0.07(0.04)~	0.07(0.04)~
Late Career (>15 years)	-0.02(0.03)	-0.02(0.03)	-0.08(0.03)**	-0.08(0.03)**	-0.05(0.04)	-0.05(0.04)	0.04(0.03)	0.04(0.03)
Perceives that administration is not supportive	0.30(0.04)***	0.30(0.04)***	0.27(0.02)***	0.27(0.02)***	0.22(0.03)***	0.22(0.03)***	0.14(0.03)***	0.14(0.03)***
Teacher Perception of Demoralization	0.28(0.03)***	0.28(0.03)***	0.31(0.03)***	0.30(0.03)***	0.26(0.03)***	0.26(0.03)***	0.24(0.03)***	0.24(0.03)***
Urban		-0.03(0.03)		-0.02(0.03)		0.12(0.03)***		0.06(0.03)~
Rural		-0.22(0.03)***		-0.27(0.02)***		-0.23(0.02)***		-0.16(0.03)***
0-10% students of color		-0.11(0.03)***		-0.13(0.03)***		-0.12(0.02)***		-0.15(0.03)***
90-100% students of color		-0.01(0.04)		0.05(0.03)		0.05(0.04)		0.02(0.03)
Percent Student Qualifying for FRLP		0.02(0.03)		0.04(0.03)		0.09(0.04)*		-0.02(0.04)
Managerial Leadership		0.01(0.04)		0.01(0.03)		-0.03(0.03)		0.01(0.03)
Shared Leadership		-0.20(0.03)***		-0.15(0.03)***		-0.08(0.03)**		-0.02(0.03)
Instructional Leadership		0.06(0.03)*		0.10(0.03)**		0.01(0.03)		0.02(0.03)
r^2	0.23(0.02)***	0.10(0.02)***	0.23(0.02)***	0.14(0.02)***	0.16(0.02)***	0.16(0.02)***	0.11(0.02)***	0.08(0.02)***
-2LL (all groups)	130335516.7	130321786.8						
AIC (all groups)	130335604.7	130321930.8						
Teacher Level Variance Explained	15%	15%	15%	15%	11%	7%	7%	7%
School Level Variance Explained	2%	13%	0%	9%	7%	21%	3%	10%
Percent Variance at the School Level	28%		32%		38%		29%	

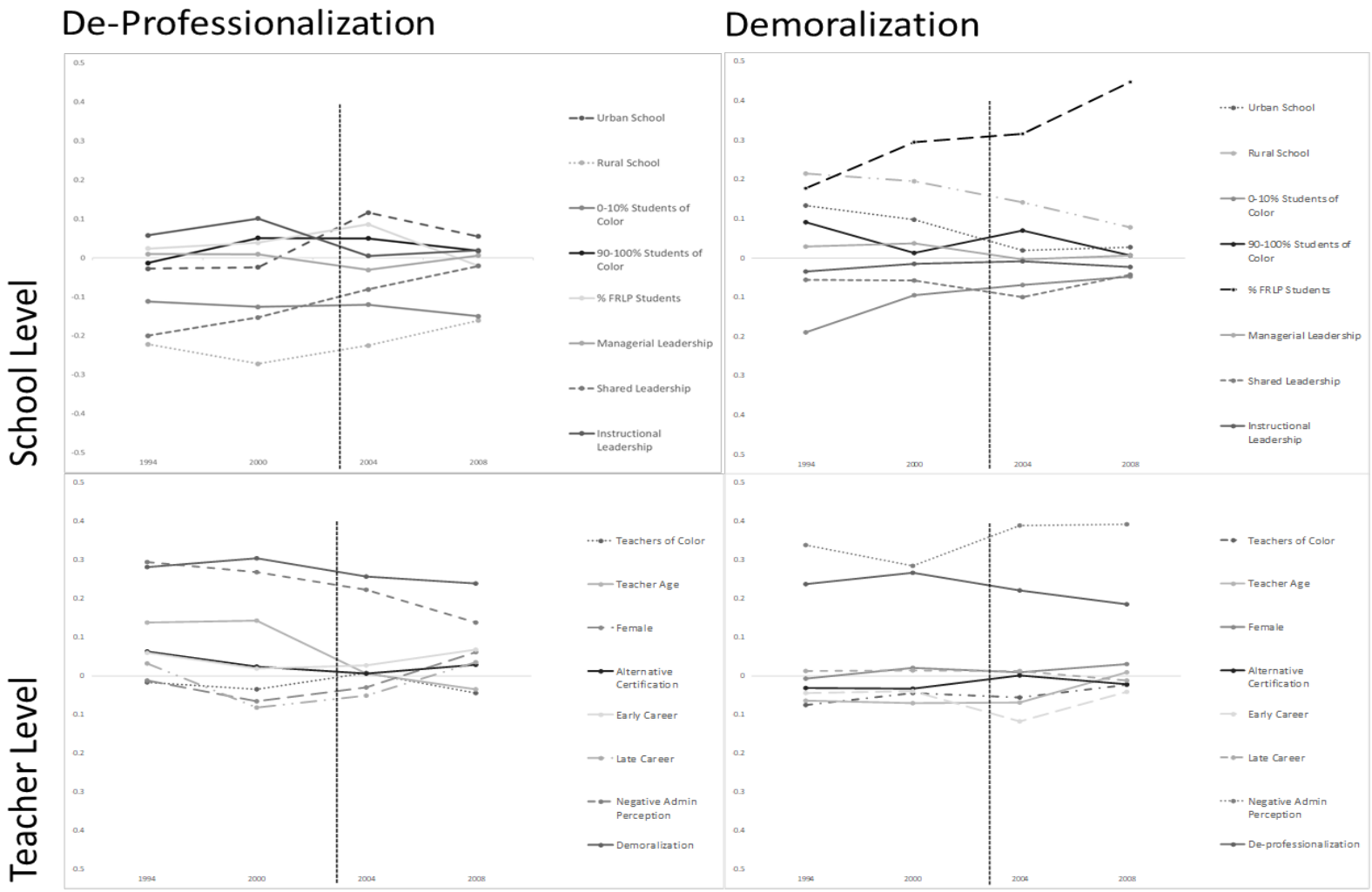

Figure 1.1. Change in Regression Standardized Coefficients of Teacher- and School-level Predictors of Teacher Perception of Demoralization and De-professionalization.

Differences in Teacher Perceptions of De-professionalization and Demoralization between School Types

We found significant differences in teacher perception of demoralization between the four school types across all years of the study [1994: $F(3,8550) = 256.15$, $p < .001$; 2000: $F(3,7290) = 403.72$, $p < .001$; 2004: $F(3,7240) = 510.34$, $p < .001$; 2008: $F(3,4460) = 402.88$, $p < .001$). When examining visual representation of changes in standardized means of teacher perception of demoralization between the school types across time (see Figure 1.2), it shows an increase in perception of demoralization in high-poverty schools that also serve a high percentage of students of color from 1994 to 2000, and the same increase was seen in high-poverty schools serving a low percentage of schools of color. However, both of these school types saw a decrease in teacher perception of demoralization from 2000 to 2004, immediately before and after NCLB implementation. However, teacher perception of demoralization in low-poverty schools that serve a high percentage of students of color sharply increased during the same period. In contrast, teacher perception of demoralization in low-poverty schools that serve a low percentage of students of color decreased between 2000 and 2004. This result suggests that the percentage of students of color served by a school is an important factor in teacher perception of demoralization. However, a review of the *individual* effects of these variables on teacher demoralization would suggest that poverty or FRPL has a more significant effect on teacher demoralization than a school serving a high percentage of students of color (refer to Table 1.5).

We also found significant differences in teacher perception of de-professionalization between schools serving high/low eligibility for free/reduced lunch

and high/low percentage students of color student populations across all four SASS samples [1994: $F(3,8550) = 138.58$, $p < .001$; 2000: $F(3,7290) = 164.23$, $p < .001$; 2004: $F(3,7240) = 281.67$, $p < .001$; 2008: $F(3,4460) = 59.79$, $p < .001$). An examination of the visual changes in standardized means of teacher perception of de-professionalization between the school types across time shows an increase for high-poverty schools that also serve a high percentage of students of color from 2000 to 2004 that followed a decrease in teacher perception of de-professionalization from 1994 to 2000 (see Figure 1.2). However, high percentage of students of color and percent students qualifying for free/reduced lunch were not significant predictors of teacher de-professionalization when considered separately (as shown in Table 1.6). These results suggest that intersection of poverty and racial composition of schools has an additional effect on teacher perception that is not fully described when considering these variables separately.

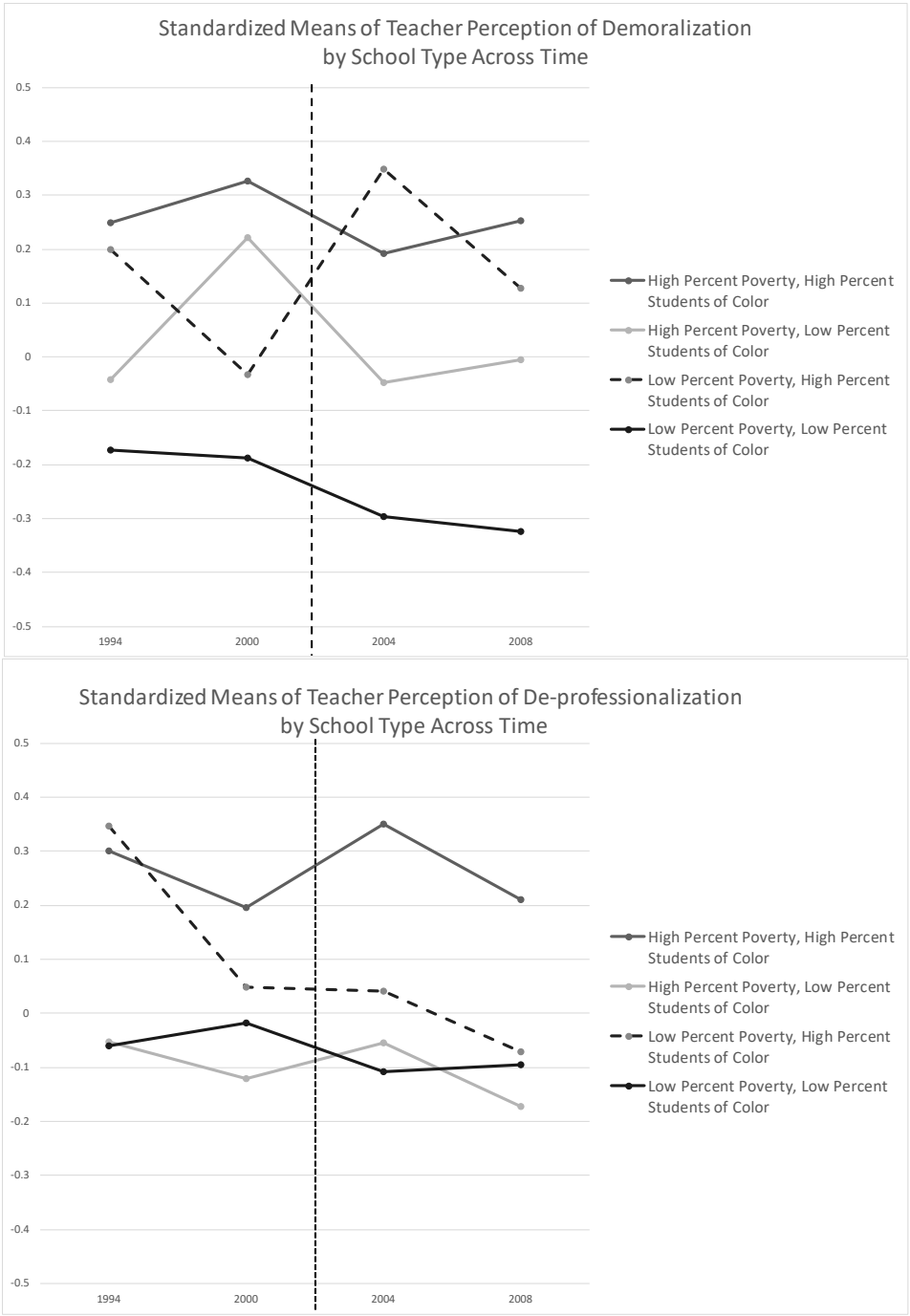

Figure 1.2. Differences in Standardized Means of Teacher Perception of Demoralization and De-professionalization between Schools Serving High Poverty-High Percentage Students of Color, High Poverty-Low Percentage Students of Color, Low Poverty-High Percentage Students of Color, and Low Poverty-Low Percentage Students of Color Student Populations.

Discussion

The purpose of this article was to describe changes in teachers' perceptions of de-professionalization and demoralization during the state-level accountability period under IASA and the federal-level accountability period of NCLB and to determine what teacher and school level factors predict teacher de-professionalization and demoralization. We find that teacher perception of demoralization significantly increased from 1994 to 2008 and from immediately prior to following NCLB, and this finding is consistent with the body of previous qualitative work that describes teacher worry and stress, burnout, and negative psychological impacts of accountability policy pressure (Dunn, 2015; Eslinger, 2012; Santoro, 2011). We also find that a large amount of variance, 42%- 49% in teacher perception of demoralization is at the school level, which suggests that teacher demoralization is highly contextualized by schooling environment. Contrary to the narrative surrounding demoralization in urban schools, we find that school urbanicity is not a significant predictor of teacher perception of demoralization, rather, school poverty level, as measured by the percent of students qualifying for free/reduced lunch, is the primary school characteristic driving the increase in teacher demoralization immediately following NCLB. Additionally, when comparing school types, we find that the largest increase in teacher perception of demoralization occurred in schools with a low percentage of students qualifying for free/reduced lunch but a high percentage of students of color. Taken together, these findings further support the need for analysis by school typology that considers the intersection of student race/ethnicity and socioeconomic level outside of locale (Adams & Adams, 2003; Milner & Lomotey, 2014; Obiakor & Beachum, 2005; Noguera, 2003).

With teacher perception of de-professionalization, the main finding was an overall increase from 1994 to 2008 with a significant increase from between 2000 and 2004, which differs from previous research. Grissom, Nicholson-Crotty and Harrington (2014) demonstrated that teachers did not perceive reduced control over the technical core of their work following passage of NCLB, but instead perceived increased control over their classrooms following NCLB. Our results related to teacher perception of de-professionalization lend support to the claim that urban schools experience differential negative accountability policy pressure compared to suburban schools. Urban school classification showed a significant increase in positive regression coefficient immediately following NCLB implementation, however, unlike demoralization, a high percentage of students of color or students qualifying for free/reduced lunch were not individually significant predictors of teacher perception of de-professionalization. An examination of differences in de-professionalization in different school types shows that the only school type to experience an increase in teacher perception of de-professionalization pre- and post-NCLB were schools that serve an intersection of high percentages of students qualifying for free/reduced lunch and high percentages of students of color. This work echoes what other researchers have suggested, that the definition of urban education should be clarified to represent the cumulative and synergistic effects persons of color re-segregated into depressed urban locations that are characterized by pervasive poverty (Adams & Adams, 2003; Grant & Zwier, 2014; Milner & Lomotey, 2013; Noguera, 2003).

The teacher level variable that showed a consistent positive relationship to teacher demoralization a negative perception of administrator support, and this variable was also

the only teacher-level predictor that showed a significant increase between analysis years; specifically, this predictor increased pre- to post-NCLB passage. This coincides with the findings that the level of support provided to teachers during policy implementation is an important part of the school administrator's role as a policy coupler (Spillane, Parise, & Sherer, 2011). It also affirms previous findings that teachers frequently perceive that administrators are not responsible for policy mandates but are responsible for understanding and minimizing the negative impacts of policies on the work life of teachers within their buildings (Wronowski, 2017, Dorman, 2003). Finally, this is an important finding because perceived administrator support has also been identified as a positive predictor of teacher turnover, this commonality in relationship suggests a need to examine the relationship between post-NCLB teacher demoralization and teacher turnover (Boyd et al., 2011). Although principal shared leadership had an inverse effect on teacher demoralization during the period of state-level accountability, the finding that the negative coefficient was largest immediately following NCLB implementation, may suggest that shared leadership is a viable approach to policy implementation that preserves mission consensus and personalization of the work environment (Dorman, 2003).

While our findings support a conclusion that teacher perception of demoralization and de-profession have increased during the era of accountability policy from the 1990s to the late 2000s, and that school context significantly affects these perceptions, this study is not without limitations. For our analysis, all schools with at least five responding teachers were retained in the overall models. This number was chosen because the average number of teachers surveyed per school is between three and eight, thus, we could

maintain most of the surveyed schools in the study sample. However, a small cluster size can decrease reliability in multilevel modeling. Another limitation of the study is that we are attempting to identify longitudinal trends in a cross-sectional repeated data rather than in a true longitudinal data set. In the future, we believe that the causal inference of these models could be improved by adding a comparison group to the overall design. However, this article provides a starting point for future research using a teacher perception of de-professionalization and demoralization framework that provides guidance for operationalization and generalizability of these constructs in large, nationally representative data sets.

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Chapter III- ARTICLE TWO

"Examining the Relationship of Teacher Perception of Accountability and Assessment Policies on Teacher Turnover During NCLB"

Co-authored with Angela Urick, The University of Oklahoma

Abstract

The purpose of this study is to determine the relationship between teachers' perception of their work, their intent to leave their current position, and their realized turnover, either in the form of leaving profession or moving schools at the height of the federal accountability policy era in the United States. The study uses a teacher perception of de-professionalization and demoralization framework operationalized using the restricted use Schools and Staffing Surveys and Teacher Follow-up Surveys administered by the National Center for Education Statistics in structural equation models to compare the relationship of de-professionalization and demoralization to turnover in teachers who cited accountability policies as a factor in their turnover decision and those who did not. We find that teacher worry and stress associated with demoralization is a significant predictor of intent to leave in both groups of teachers, but teacher worry and stress is only a significant predictor of teachers leaving the profession and moving schools in teachers who cite accountability policies as a factor in their turnover decision. These findings demonstrate an important relationship between teachers' perceptions of accountability policies, perception of their working conditions, and turnover, and these findings have important implications for policy makers and educational leaders as the U.S. transitions from NCLB to ESSA.

Introduction

The passage of the No Child Left Behind Act of 2001 (NCLB) marked the initiation of a federal accountability era characterized by the diffusion of state-level standards, assessment, and accountability reforms of the 1990s through the 2000s to the national level (Coburn, Hill, & Spillane, 2016). Following NCLB the American Recovery and Reinvestment Act in 2009 (ARRA) which included the Race to the Top (RTTT) grant program allowed states to compete for funding to further promote the development of accountability metrics through formalized educator evaluation and data systems. The federal accountability era focused on teachers as a leverage point for educational reform, using federal-level sanctions with NCLB and financial incentives with RTTT to control state-level reforms (Superfine, Gottlieb, & Smylie, 2012). Some provisions of this policy era included the "highly qualified teacher" mandate which shifted teacher qualifications, and the connection of basic skills testing tied to sanctions and funding, which translated into mandatory state standards directing the curriculum. This focus on the teacher as a means to increase student achievement, linked to accountability standards, seemed to professionalize the teacher workforce; however, it also diminished teachers' autonomy over the technical core of their work (Milner, 2013; Neal & Schanzenbach, 2010; Nichols & Berliner, 2007). The loss of autonomy over their work combined with performance pressure of assessment and accountability policies have lead teachers to report increased stress and anxiety, longer work hours, and lower morale (Byrd-Blake, 2010; Rentner et al., 2006; Haladyna, Haas, & Allison, 1998; Reback, Rockoff, & Schwartz, 2011; Wronowski, 2017). In addition to the de-professionalizing loss of autonomy over the technical core of their work, teachers in the federal era of accountability policy have also

reported demoralization that is distinct from generalized burnout and low morale that are experienced on an individual level. Santoro (2011a, 2013) describes the condition of the teaching profession post-NCLB as one in which teachers, due to accountability demands, can no longer access the moral rewards of teaching, connecting meaningfully with students, meeting students' needs, and improving the overall lives of students. Teacher perception of de-professionalization and demoralization are constructs that represent a specific type of disaffection with teaching in the era of federal accountability policy, and these negative feelings may lead to the unintended consequence of teachers moving from schools labeled as "low-performing" or leaving the profession altogether (Darling-Hammond, 2007).

A significant body of previous research has shown that dissatisfaction with working conditions is an important antecedent to predicting teacher turnover (Ingersoll, 2001a, 2001b; Sutcher, Darling-Hammond, & Carver-Thomas, 2016; Horng, 2009; Kersaint et al., 2007; Loeb, Darling-Hammond, & Luczak, 2005; Shen, 1997). Decreased teacher retention in schools and districts is a problem that has both significant fiscal effects and harmful organizational effects on student achievement (Amrein-Beardsley, 2012; Darling-Hammond, 1997; Darling-Hammond & Berry, 1999; Ronfeldt, Loeb, & Wyckoff, 2013; Synar & Maiden, 2012). A small number of previous studies have explored the relationship between teachers' perceptions of accountability and assessment policies and turnover. In an examination of the Teacher Follow-Up Surveys of 2011-2012, Podolsky et al. (2016) found that 25% of public school teachers who voluntarily left the teaching profession cited dissatisfaction with school assessment and accountability measures on their teaching and/or curriculum as their primary reason for

leaving, and 17% cited dissatisfaction with support for preparing students for assessments. The effects of accountability policies differ across schools with lower performing schools generally experiencing lower levels of teacher retention (see Boyd et al., 2008, Clofelder et al., 2004; Feng, Figlio, & Sass, 2018).

This study seeks to extend the empirical work relating post-NCLB accountability and assessment policies to teacher turnover using nationally representative samples of teachers surveyed in the National Center for Educational Statistics Schools and Staffing Surveys and Teacher Follow-up Surveys from 2007-2008 and 2012-2013, toward the end of the NCLB era. Specifically, this study examines whether teacher perceptions of de-professionalization and demoralization predict a teacher's intent to leave their position, and ultimately, their turnover, by asking the following research question:

1. To what extent do teacher demoralization and de-professionalization predict a teachers' intent and occurrence of leaving their current school for teachers who respond that accountability policies are a reason for turnover compared to teachers who did not?

Combining teacher perception data regarding their work and views of accountability and assessment policies with their intent to leave, and observed attrition or mobility into a single model allows for a deeper description of era how teachers' feelings of NCLB might have influenced their stability in the profession. These potential unintended consequences of accountability policies are needed to inform instructional policymaking and implementation as the United States moves into the implementation phase of the Every Student Succeeds Act (ESSA), which maintains student testing, although to a lesser

degree, and expands the possibility of measures, while keeping formalized teacher evaluation.

Literature Review

This study is situated within the existing teacher workforce literature, including the literature examining general trends related to teacher staffing and turnover, and the literature describing teacher perceptions of their work. However, this study also considers the effects of accountability and assessment policy on both aspects of the teacher workforce. To properly contextualize this study, the following literature proceeds in two parts: a review of teacher staffing issues including the role of turnover in the teacher workforce, and a discussion of teacher perception of their work in the federal accountability policy era using a de-professionalization and demoralization framework.

The Teacher Workforce and Teacher Turnover

Two processes contribute to stability or instability within the teacher workforce; recruitment focuses teachers' entry into the profession while retention focuses on teachers' stability in their current teaching assignment at their current school. Decreased teacher retention can be a result of teacher mobility, or a teacher moving to a different school, or a result of teacher attrition, a teacher leaving the profession. Ingersoll, Merrill, and Stuckey (2014) utilized the Schools and Staffing Survey (SASS) data spanning 25-year period from 1987 to 2012 to identify trends in changes of the overall teacher workforce. Based on their analysis, the teacher workforce within the US has become larger, older as well as younger in age, more female, more racially and ethnically diverse, more consistent in academic ability, and less stable. The overall demographic trend showing that the teacher workforce is becoming both older and younger in age has

implications for those studying teacher recruitment and retention. The age distribution of teachers has become bimodal since the 2007-2008 SASS survey, showing the largest numbers of teachers at the ages of 30 and 60, although the number of older teachers decreased from 2008 to 2012 (Ingersoll, Merrill, & Stuckey, 2014). In the 1990s there was a significant emphasis on a predicted shortage of teachers due to the retirement of "baby-boomers" (Darling-Hammond, 1997; National Commission on Teaching and America's Future, 1996). However, this data suggest that the teacher workforce does not face a supply-side shortage or recruitment problem, rather, the teacher workforce has an attrition problem which has resulted in the modal level of experience shifting from 15 years in 1987-1988 to less than 6 years in 2011-2012.

This is reflective of the finding that nearly 50% of all teachers leave the profession within their first five years of teaching, never reaching a high experience level (Ingersoll, 2001b). This pattern of attrition of early career teachers who are replaced by first year teachers has been referred to the "revolving door" of teaching and is likely to increase if the current rates of retirement and turnover persist (Ingersoll, 2002, 2004). Additionally, teacher attrition is not driven by the "predictable" attrition of teachers who reach retirement age; the most recent examinations of the Teacher Follow-Up surveys reveal that more than 50% of teachers who left the profession left voluntarily before reaching retirement (Podolsky et al., 2016; Sutcher, Darling-Hammond, & Carver-Thomas, 2016).

Teacher demographics and turnover. Teacher retention has varied based on individual teacher demographics, education, and certification. Reviews of early work on the retention of teachers of color showed a clear pattern; teachers of color were retained at higher levels than white teachers (Allen, 2005; Borman & Dowling, 2008, Guarino et

al., 2004, 2006; Ingersoll, 2001; Shin, 1995). This trend was consistent for both Hispanic and black teachers of both genders (Adams, 1996; Kirby et al., 1999; Murnane et al., 1989; Murnane & Olsen, 1989). However, more recent research conducted by Ingersoll and May (2011a, 2011b) has shown a shift in the turnover rates of teachers of color with 2004-2005 SASS data showing the highest annual level of attrition of teachers of color in a two-decade period. The number of teachers of color entering the profession has been almost double the increase in the number of white teachers from 1988 to 2012, and has outpaced the increase in number of students of color in the U.S., however, an examination of SASS data from 2003-2004 shows that almost 48,000 teachers of color entered the teaching workforce in that year, but more than 56,000 teachers of color left the teaching workforce at the end of the same year (Ingersoll & May, 2011a, 2011b). While large numbers of teachers of color leave the profession, teachers of color do not have the same mobility pattern as white teachers. White teachers are more likely to move away from urban schools serving large numbers of students of color and poverty and into suburban schools with predominantly white, middle-class students, teachers of color are more likely to move into schools with similar demographics to the schools they left, resulting in no net losses for urban, high-needs schools as an overall category (Ingersoll & May, 2011a, 2011b). Teacher education and route to certification have also been previously shown to have a relationship to turnover. In an examination of SASS data, Redding and Smith (2016) found that the number of teachers entering teaching through alternative pathways has been steadily increasing, with teachers using these pathways making up 25 percent of the total teaching force by the 2011-2012 SASS administration. Using the 2007-2008 SASS administration data, the authors also found that alternatively certified

teachers were significantly more likely to turnover as compared to traditionally certified teachers, and that the rate of turnover of alternatively certified teachers increased from 1999-2000 to 2007-2008 while the rate of traditionally certified teachers decreased during the same time-period. Boyd et al. (2011) also found that alternatively certified teachers from both local New York state alternative certification programs and from the Teach for America (TFA) program were significantly more likely to turnover as compared to traditionally certified, "college recommended" (CR) teachers from New York university programs, and that TFA teachers were 11 times more likely to turnover than CR teachers by their third year of service. Overall, the background of teachers as well as their training leading into the profession have helped to predict their commitment to the profession and a particular school.

Teacher work perceptions and turnover. Consistent across backgrounds and training, teachers with positive work perceptions are more likely to stay compared to those with negative perceptions. For example, when organizational characteristics such as principal leadership and teacher autonomy were included in models of mathematics and science teacher turnover, many of the demographic variables, such as poverty rate and locale, that previously predicted turnover, were no longer significant (Ingersoll & May, 2012). Further, across the teacher retention literature, teachers who perceive that they have more autonomy over their work and higher levels of administrative support are less likely to move to another school or leave the profession (Borman & Dowling, 2008; Guarino et al., 2006; Podolsky et al., 2016; Urick, 2016).

This administrator support and inclusion of teachers in decisions is important to help reduce external pressures and other job burdens that teachers might face. Principals,

through this teacher autonomy as well as their own effectiveness of the communication of a vision, teacher support and management, influence teacher satisfaction and their decisions to stay (Grissom, 2011; Urick, 2016). This principal effectiveness helps to moderate negative job pressures for teachers. For example, Ingersoll (2001a, 2001b) and Shen (1997) found that teacher influence over their work and school factors including discipline policies led to higher teacher retention. A reduction in routine paperwork and administrative duties that interfere with teaching, along with leadership support also negatively influenced teacher turnover (e.g. Ingersoll, Merrill, & May, 2016; Kersaint et al., 2007; Ladd, 2011; Patterson, 2002; Tye & O'Brien, 2002). Additionally, scholars have found that teachers were more likely to report that their school had a turnover problem if they perceived that school conditions, including physical conditions, were poor (see Buckley, Schneider & Shang, 2004; Loen, Darling-Hammond, & Luczak, 2005). Finally, assessment of teachers and students is an important factor in teachers' overall working conditions and feelings toward their job (Ingersoll Merrill, & May, 2016; Kersaint et al., 2007). Low school accountability ratings, perception of paperwork burden and stress associated with accountability, and diminished autonomy over their work during the federal accountability era have all been shown to have a positive relationship with teacher turnover (Clotfelder et al., 2004; Feng, Figlio, & Sass, 2018; Hanushek & Rivkin, 2010; Ingersoll, Merrill, & May, 2016; Kersaint et al., 2007). The finding that teacher perceptions of their work has a relationship with turnover in schools that received low-performance ratings or sanctions adds an important facet of understanding to the research of teacher turnover issues in the federal accountability era. Specifically, this finding is a first step in understanding the overall mechanism of accountability-related

turnover. This study builds on this understanding by examining a more descriptive framework for teachers' perception of their work in the NCLB policy period.

Teacher Perception of De-professionalization and Demoralization Framework

Teacher perceptions of their work have frequently been linked to turnover, and empirical work has also linked accountability effects to teacher turnover. However, teacher turnover is a complex and multifaceted issue that is also connected to teacher personal preferences and school-level factors. Therefore, it is useful to provide a framework to assist in disentangling some of these factors to further examine teacher turnover in a model that also includes teacher perception of accountability and assessment policies and perception of their work during the era of federal accountability policy. We propose that the unintended consequences of accountability and assessment policies on teachers' perception of their work can be organized into a de-professionalization and demoralization framework.

Teacher perception of de-professionalization. Teacher professionalization is broadly important for maintaining high standards of quality and keeping the integrity of the mission of teachers intact (Benveniste, 1986, Carter Andrews, Bartell, & Ruchmond, 2016; Gentry, Baker, Lamb, & Pate, 2016; Heid & Leak, 1991; Nelson, 1949, 2009; Popkewitz, 1994). It has also been hypothesized that professionalization will help to attract the best and brightest to teaching, will improve teacher motivation, job satisfaction, teacher retention, and will improve overall teacher performance and innovativeness which would, in turn, lead to improved student learning (Heid & Leak, 1991; Ingersoll & Perda, 2008). However, professionalization is in a state of fluid equilibrium with the interests of the public and with other professions (Bureau & Suqut, 2009; Ingersoll &

Collins, 2017). In terms of the teaching profession, this equilibrium shifts towards teacher professionalization when teachers have autonomy over the technical core of their work, specifically, curriculum and instruction.

It has been suggested that NCLB contributed to the professionalization and de-professionalization of teaching. NCLB's explicit call for all teachers to be "highly qualified" by demonstrating competency in all subjects that they were assigned to teach suggested that teaching required specialized knowledge and skills that defined teaching as a profession (Ingersoll, 2003; Milner, 2013). However, the accountability mechanism of NCLB tied schools' and teachers' performance ratings to student performance on standardized assessments in a limited number of subject areas. This led to a narrowing of curriculum and instruction and reduced teacher autonomy over the technical core of their work to ensure improvement using a standardized test score criterion, and these effects were more concentrated in schools who were likely to be labeled as failing due to structural inequities that existed long before the passage of NCLB (Darling-Hammond, 2007; Milner, 2013).

The construct of teacher de-professionalization defined in this study posits that NCLB linked teacher and school evaluation of quality to performance on standardized assessments, and, as a result, curriculum, coursework, and instruction has narrowed to focus on improvement in tested subjects, frequently without input from teachers (Ingersoll & May, 2016; Ingersoll & Collins, 2017; Milner, 2013). NCLB placed an emphasis on standardized test scores in mathematics and reading as the primary measure of school quality, and this emphasis led to a narrowing of curriculum to focus on these subjects, frequently at the expense of time spent on non-tested subjects such as science,

social studies, and elective courses (see Calwelti, 2006; Jacob, 2005; Hursh, 2007; Koretz, 2008; Nichols & Berliner, 2007; Rothstein, Jacobsen, & Wilder, 2008). In addition to a narrowing of curriculum, schools under threat of sanction under NCLB tended to intensify effort towards short-term educational strategies that may save them from probation or restructuring rather than helping students improve academically in the long-term. One common strategy used in this regard is to focus on low-level test preparation activities in tested domains rather than providing a rich curricular experience (Malen & Rice, 2016). Enriching instructional practices such as culturally relevant pedagogy and inquiry-based learning are often deleted from pedagogical practices in exchange for a homogenized culture of students as "an army of worksheet filler-outers" (Camp & Oesterreich, 2010). Narrowing of curriculum and dilution of instructional approaches to low-level test preparation frequently ran counter to the professional preferences of teachers in the federal accountability era and represented diminishing autonomy over the technical core of their work (Powell et al., 2009; Schoen & Fusarelli, 2008; Stillings, 2005). The perceived changes to the technical core of their work and autonomy over that work is also related to teachers' perception of demoralization which is best characterized as a disconnection from the moral rewards and ethic of the profession (Santoro, 2011a).

Teacher perception of demoralization. Previous conceptual and empirical work has sought to describe the effects of accountability and assessment policies on the affective domain of teachers' work. In a conceptual examination of the effect of accountability policy on teachers' feelings about their work, Sahlberg (2010) describes a condition in which teachers experience a conflict with the outcomes of high-stakes

accountability and the values associated with education in a knowledge society. Sahlberg (2010) suggests that teachers hold the motivation to learn, creativity and expression, and student flourishing as key values of their profession, and that the narrowing of curriculum, instruction, and subject offerings because of accountability pressures is in direct conflict with these values. Teachers are left trying to balance their work between the moral purpose of serving students in a holistic way that is defined as a public right while at the same time meeting the requirements for perceived efficiency as demonstrated by increased standardized test scores when education is also defined as a private good (Cuban, 2007). This value dissonance has been empirically linked to decreased job satisfaction mediated by a decreased sense of belonging and emotional exhaustion (Skalvik & Skalvik, 2011). Using a qualitative methodology, Santoro (2011b) connected to teacher moral and value dissonance to attrition in high-poverty schools, and she introduces a new category of teacher attrition, principled leavers, to describe teachers who exit the profession due to a moral or value conflict. Based on the previous work describing teachers' affective response to accountability policy pressures, Santoro (2011a) suggests a demoralization framework to characterize the value dissonance teachers describe with relation to their work in the accountability policy era.

The conceptualization of teacher demoralization builds on the work describing the affective response of teachers to the implementation of accountability policies. Demoralization as it is conceptualized in this framework has two facets related to the value dissonance between teachers' perceived purpose of their work and the nature of their work in the accountability policy context. First, administrative paperwork and duties related to accountability and assessment distract from time spent on teaching and on

developing relationships with students (Cuban, 2007; Sahlberg, 2010; Santoro, 2011a, 2011b). Second, teachers experience worry and stress, both for themselves and their students, related to accountability pressure, and this worry and stress can have emotional exhaustion as an endpoint (Santoro, 2011a; Skaalvik & Skaalvik, 2011). Third, a continued experience of student failure on standardized assessments may lead teachers to practice external attribution of those failures to student factors outside of their control, including poverty, poor student health, lack of parental involvement or care, and poor student motivation. This attribution pattern may be increased in teachers who are already experiencing emotional exhaustion related to accountability pressures (see Georgiou, Christou, Stavrinides, & Panaoura, 2002; Weiner, 1985).

In this study we propose that teacher perception of de-professionalization, described as a loss of autonomy over curriculum and instruction will be positively related to both teacher's intent to leave and realized turnover. Further, we propose that constructs representing teacher demoralization in the forms of worry, stress, and emotional exhaustion and a negative perception of external student factors related to education will also be positively related to intent to leave and realized turnover. Finally, the relationship between this framework (Figure 2.1) and teacher perception of accountability and assessment policies will be examined by comparing this model of teacher turnover between teachers who cited accountability and assessment policies as a factor in their turnover decision and teachers who did not.

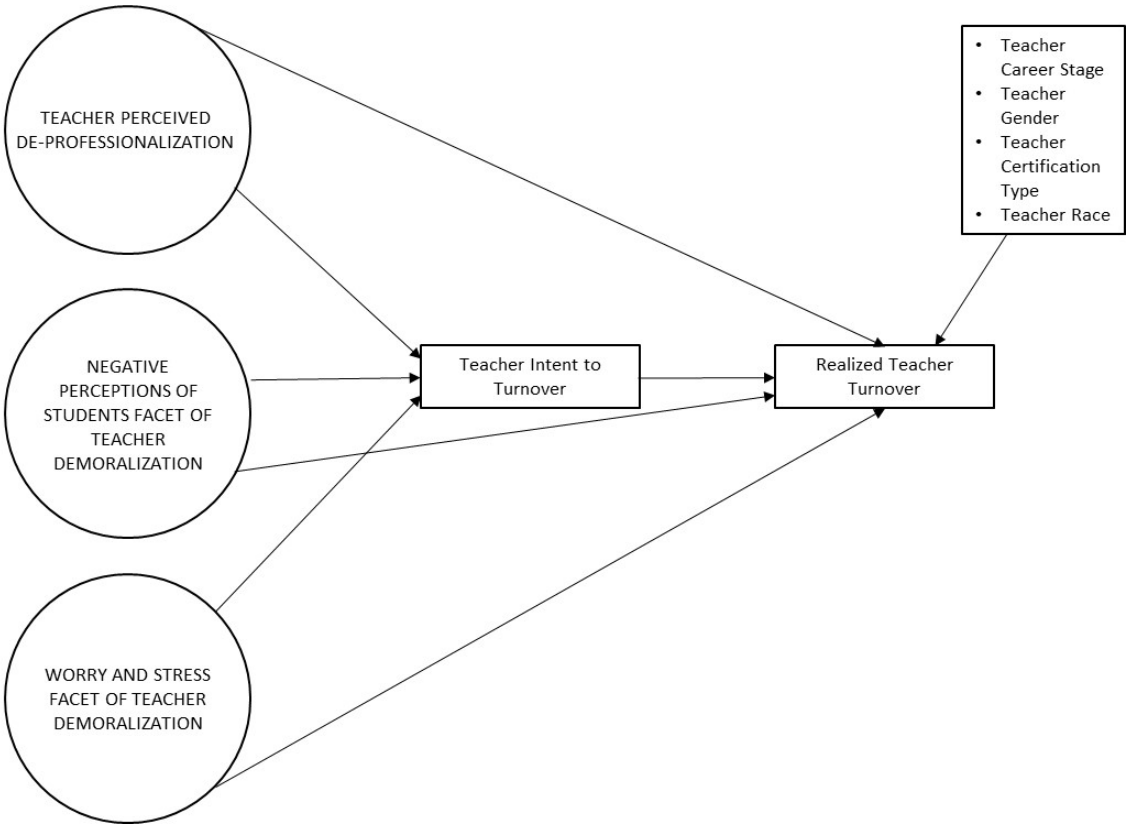

Figure 2.1: Theoretical Model of the Relationship of Teacher Perception of De-professionalization and Demoralization to Teacher Intent to Turnover and Realized Turnover.

Method

The purpose of this study is to understand how teachers who believe accountability and assessment are issues compared to those teachers who do not might have different degrees and paths of relationships between their perceptions of de-professionalization, demoralization, intent to leave and turnover. Structural equation modeling (SEM) was used to examine the relationships between teacher perceptions of de-professionalization and demoralization and intent to leave and realized turnover. SEM provides information about the direct effects of de-professionalization and demoralization

on turnover outcomes, but it also brings a higher-level perspective to the evaluation of the complete model between teachers who cited accountability and assessment policies as a factor in their turnover decision and those who did not (Kline, 2016).

Sample

This study is a secondary analysis of the Schools and Staffing Surveys (SASS) and Teacher Follow-up Surveys (TFS) from the 2007-2008/2008-2009 and 2011-2012/2012-2013 administrations collected by the National Center for Education Statistics (NCES). The SASS data are useful for this study because the surveys provide teacher perceptions that correspond with the theorized constructs of de-professionalization and demoralization. Additionally, the TFS includes both teacher-reported intent to leave as well as realized turnover from a portion of all teachers surveyed in the main SASS. The sampling procedures of SASS follow a two-stage, clustered design that is stratified at both the school and teacher levels which yields a nationally representative sample of schools and teachers for the year of the SASS administration (Tourkin et al., 2010). For the first stage, schools are selected using the Common Core of Data (CCD) following a stratified sampling frame. For the second stage, up to twenty teachers, with an average between three and eight, were selected per school to participate. Teacher sample weights are provided for both the SASS (TFNLWGT) and the TFS (TFSWGT) to adjust the sample estimates to represent the framed target population (Tourkin et al., 2010). The sampling frame for the TFS consists of all teachers who responded to the SASS teacher survey in the previous school year. The sample design objective for the TFS survey is to include teachers in three turnover categories, those who were likely to stay in their current position, those who were likely to move to another teaching position at a different school

site, and those who were likely to leave the profession (Graham et al., 2011). NCES has applied a multi-stage imputation procedure to address missing data at all levels for SASS data.

The public school teacher samples for the SASS administrations included (2007-2008 and 2011-2012) in the study range from ~N = 47,600- 51,100 teachers, and the TFS administrations included (2008-2009 and 2012-2013) include teacher samples ranging from ~N = 6,500 – 7,000 teachers. All sample estimates are rounded to maintain confidentiality per NCES requirements for restricted data use. Due to the presence of intentional missing data in the TFS records (see Graham, et al., 2011), the resulting data set contained ~2500 individual teacher records.

Variables

Teacher perception of accountability and assessment policies. The TFS surveys from 2008-09 and 2012-13 included three items related to how assessment and accountability policies related to their turnover decision, the decision to leave the profession, move to another teaching position, or stay in their current position. These items were scored on a five-point Likert scale (see Appendix A), however, an examination of the frequency histograms showed a bimodal response pattern for each of these items. Therefore, two groups of teachers, those who cited accountability and assessment policies as relevant to their turnover decision and those who did not, were constructed using a composite score on these three items. Teachers who had a composite score of one were included in the accountability was not a factor in turnover decision group, and teachers who had a composite score of greater than one were included in the accountability was a factor in turnover decision group. The pooled 2007-09/2011-13

SASS/TFS file was split into two data files each containing cases from only one accountability factor group. The accountability was a factor in turnover decision contained ~1100 teacher observations, and the accountability was not a factor in turnover decision contained ~1400 teacher observations.

De-professionalization. Teacher de-professionalization is characterized as a loss of influence or control over the technical core of their work, specifically influence over curriculum and instructional decisions. Representative SASS items included, "How much actual control do you have in your classroom selecting textbooks and other instructional materials?" and "How much actual control do you have in your classroom selecting teaching techniques?". SASS items included in this construct (see Table 2.1) were recoded so that the highest Likert scale point represents the lack of influence or control over curriculum and instruction that is predicted to occur when curriculum and instruction practices were narrowed to improve student performance on standardized assessments mandated by NCLB (Cawelti, 2006; Darling-Hammond, 2007; Dever & Carlston, 2009; Hursh, 2007; Malen & Rice, 2016; Milner, 2013; Mintrop & Sunderman, 2009; Powell, Higgins, Aram, & Freed, 2009; Williamson & Morgan, 2009).

Demoralization. In this study teacher perception of demoralization is operationalized as having a teacher component (see Table 3) that includes decreased time for instruction due to accountability administrative tasks and worry and stress with emotional exhaustion as an endpoint. Representative items include, "To what extent to you agree or disagree: routine duties and paperwork interfere with my job of teaching?" and, "To what extent to you agree or disagree: The stress and disappointments involved with teaching at this school aren't really worth it?," (see Wronowski, 2017; Santoro,

2011a, 2011b; Skalvik & Skalvik, 2011). Demoralization is also operationalized as having a student component that is conceptually related to teacher demoralization (see Table 2.2). When teachers continually experience poor standardized test scores from students, they may begin to attribute those low scores to student factors outside of their control, including poverty, poor student health, lack of parental involvement or care, and poor student motivation. This attribution pattern may be increased in teachers who are already under increased worry, stress, and emotional exhaustion related to accountability pressures. Representative items for the student component include, “To what extent is student apathy a problem in this school?” and, “To what extent is lack of parent involvement a problem in this school?” (see Georgiou, Christou, Stavrinides, & Panaoura, 2002; Weiner, 1985).

Table 2.1

Descriptive Statistics of SASS Items Included in Teacher Perception of De-professionalization Latent Variable

Question	07-08/11-12 Item Number	Total Pooled Sample (n ~2500)		Accountability Group (n~ 1100)		No Accountability Group (n ~1400)	
		M	SD	M	SD	M	SD
Influence over Curriculum (1 = A great deal of control; 4 = No control)							
Selecting textbooks and instructional materials (P1)	T0280/T0427	2.27	1.08	2.38	1.08	2.17	1.06
Selecting content to be taught (P2)	T0281/T0428	2.22	1.08	2.33	1.09	2.14	1.06
Influence over Instruction (1 = A great deal of control; 4= No control)							
Selecting teaching techniques (P4)	T0282/T0429	1.44	0.71	1.54	0.79	1.36	0.64
Evaluating and grading students (P5)	T0283/T0430	1.39	0.64	1.44	0.67	1.35	0.63
Determining the amount of homework to be assigned (P6)	T0285/T0432	1.37	0.69	1.41	0.72	1.33	0.67

Note. Unweighted descriptive statistics are reported. The TFSWGT was applied as part of the Mplus weight syntax in the analysis.

Table 2.2

Descriptive Statistics of SASS Items Included in Teacher Perception of Demoralization Latent Variable

Question	07-08/11-12 Item Number	Total Pooled Sample (n ~2500)		Accountability Group (n~ 1100)		No Accountability Group (n ~1400)	
		Mean	SD	Mean	SD	Mean	SD
Negative Perception of Students Facet of Demoralization (1 = not a problem; 4 = serious problem)							
students dropping out (DM2)	T0307/T0459	1.61	0.86	1.73	0.95	1.51	0.77
student apathy (DM3)	T0308/T0460	2.55	1.05	2.79	1.04	2.53	1.02
lack of parent involvement (DM4)	T0309/T0461	2.67	0.99	2.86	0.96	2.53	0.98
poverty (DM5)	T0310/T0462	2.73	0.99	2.91	0.96	2.60	0.98
students come to school unprepared to learn (DM6)	T0311/T0463	2.87	0.96	3.12	0.90	2.69	0.96
poor student health (DM9)	T0312/T0464	1.98	0.82	2.12	0.85	1.87	0.77
Teacher Facet of Demoralization (recode 1 = strongly disagree; 4 = strongly agree)							
Routine duties and paperwork interfere with my job of teaching (DM1)	T0291/T0440	2.84	0.91	3.03	0.87	2.70	0.92
If you could go back to your college days and start over, would you become a teacher or not (DM8)	T0320/T0472	2.20	1.26	2.51	1.33	1.96	1.16
The stress and disappointments involved with teaching at this school aren't really worth it. (DM12)	T0313/T0465	1.98	0.94	2.26	0.97	1.75	0.85
If I could get a higher paying job, I'd leave teaching as soon as possible (DM13)	T0316/T0468	2.10	1.15	2.33	1.09	1.92	0.99
I think about transferring to another school (DM15)	T0317/T0469	2.12	1.15	2.29	1.19	1.99	1.11
I don't seem to have as much enthusiasm now as when I began teaching (DM16)	T0318/T0470	2.41	1.10	2.74	1.08	2.15	1.05
I think about staying home from school because I'm just too tired to go (DM17)	T0319/T0471	1.79	0.99	2.01	1.07	1.62	0.88
I worry about the security of my job because of the performance of my students on state or local tests (P8)	T0298/T0447	2.05	0.98	2.24	1.03	1.91	0.92

Note. Unweighted descriptive statistics are reported. The TFSWGT was applied as part of the Mplus weight syntax in the analysis.

Teacher demographic covariates. Teacher demographic variables that have been previously shown to have a relationship to turnover were included as covariates on the teacher turnover variable (ATTRIT) that was the outcome variable in the analytic models. There is a well-established U-shaped curve relating teacher career stage and turnover, with most teacher attrition occurring in the first five years of teaching or after reaching retirement experience levels (Ingersoll, 2001b). Categorical dummy-coded variables for teacher experience (Early Career = 0-5 years experience, Mid-career = 6-15 years experience, Late Career = > 15 years experience) were created from the continuous SASS TOTEXPER variable in each data set (Table 3), and the Mid-career experience range was the reference category in the analysis. Dichotomous variables were created for teacher gender (male is reference), alternative teacher certification (regular certification is reference), and teachers of color (white is reference) (Boyd et al., 2011; Ingersoll & May, 2011a, 2011b; Redding & Smith, 2016).

Dependent variables. Teacher turnover (ATTRIT) was used as the distal outcome variable in the analytic models. The ATTRIT variable from the TFS was coded as a three-level categorical variable (see Table 2.3) with teachers identified as leavers who left the teaching profession, movers who moved to a teaching position in another school, or stayers who stayed teaching in their current school (0 = leaver, 1 = mover, 2 = stayer - reference). To examine the relationship between the de-professionalization and demoralization latent variables and planned and realized turnover, a dichotomous teacher intent to turnover variable was included in the analysis as a proximal outcome and was treated as a nominal mediator (0 = teacher intended to turnover, 1 = teacher did not intend to turnover).

Table 2.3

Descriptive Statistics of Teacher Demographic Covariates and Dependent Variables Included in Structural Equation Models

Variable	Total Pooled Sample (n ~2500)		Accountability Group (n~ 1100)		No Accountability Group (n ~1400)	
	Mean	SD	Mean	SD	Mean	SD
1-5 Years Teaching Experience	0.35	0.48	0.32	0.47	0.36	0.48
6-15 Years Teaching Experience (reference)	0.23	0.42	0.22	0.42	0.24	0.43
>15 Years Teaching Experience	0.43	0.49	0.46	0.50	0.40	0.49
Teacher Holds an Alternative Certification (reference = Regular Certification)	0.09	0.29	0.08	0.27	0.1	0.29
Teacher of Color (reference = White)	0.07	0.26	0.06	0.24	0.08	0.28
Teacher is Female (reference = male)	0.73	0.45	0.72	0.45	0.73	0.44
Teacher Turnover-ATTRIT (reference = stayer)			0.45	0.57	0.54	0.58
Teacher Intent to Turnover (reference = no intent to turnover)			0.69	0.46	0.82	0.39

Note. Unweighted descriptive statistics are reported. The TFSWGT was applied as part of the Mplus weight syntax in the analysis.

Analytic Procedure

Structural equation modeling (SEM) was applied using the variables outlined above in Mplus software (see procedures in Muthén & Muthén, 2015). Two separate SEM models were analyzed using the accountability was a factor/was not a factor in turnover decision data sets. Teacher perception of de-professionalization and demoralization were latent variables as defined by the indicator variables described in Tables 2.1 and 2.2. Each indicator was assigned a code (e.g. P1, P2, DM1, DM2) that correspond to the figures presented in the results. Teacher perception of de-professionalization was treated as a single latent variable, and teacher perception of demoralization was treated as two separate latent variables, negative perceptions of students and the teacher worry and

stress. This analytical choice was made based on the results of multiple confirmatory factor analysis models, (see Appendices C, D, and E) that indicated that teacher demoralization best fit in a bi-factor CFA model with the two facets of demoralization predicted by an overarching general demoralization latent variable. Teacher intent to turnover was included as a dichotomous proximal outcome in the models, and teacher turnover (ATTRIT) was included as a distal nominal outcome. When an outcome is identified as nominal in Mplus, the last category is used as a reference category; in this model, stayers were used a reference group. The direct effects of de-professionalization and demoralization were calculated for the intent to leave proximal outcome and the distal turnover outcome (see Figure 2.2). To accommodate a dichotomous proximal outcome and a distal nominal outcome a maximum likelihood (MLR) estimator and expectation maximization (EM) integration was used to integrate across the latent variable-outcomes portions of the model. (see Appendix B).

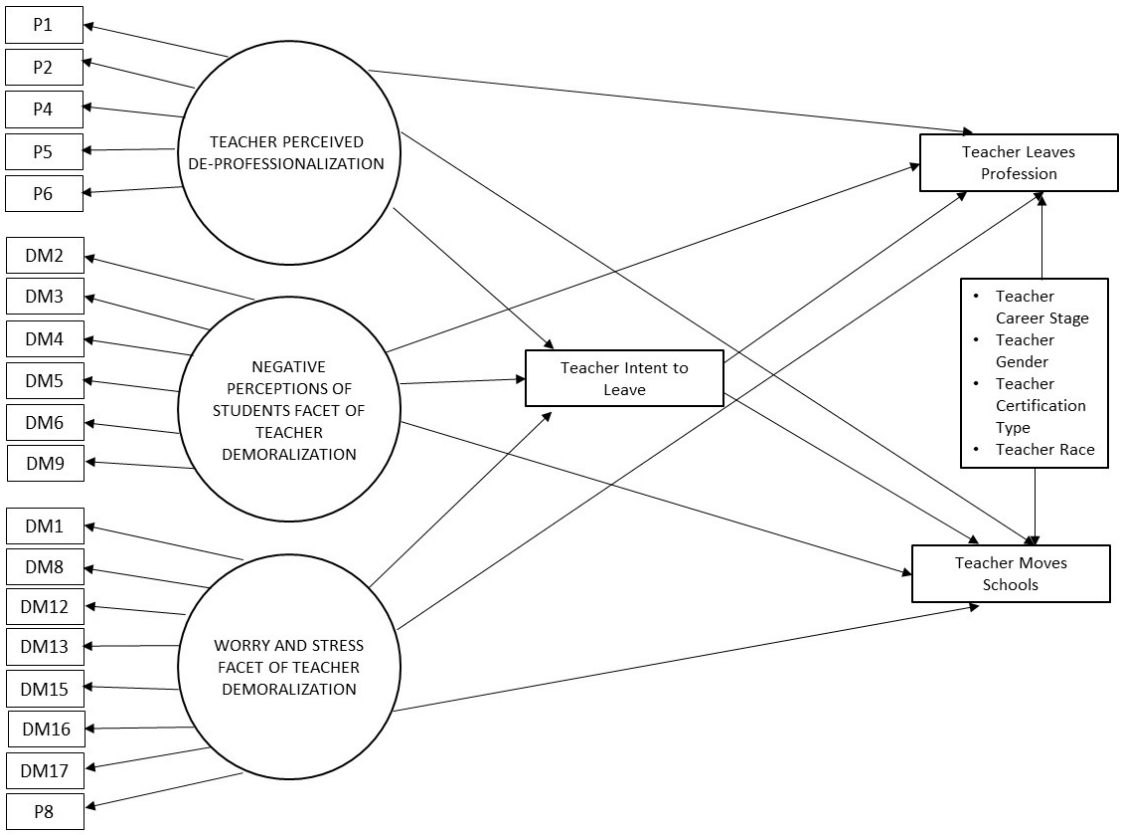

Figure 2.2: Structural Equation Model of the Relationship between Teacher Perception of De-professionalization and Demoralization and Teacher Intent to Turnover and Realized Turnover.

Results

Fit of the Measurement Model

To examine overall fit of the measurement model of the teacher de-professionalization and demoralization framework, the framework was examined using confirmatory factor analysis, and CFI, RMSEA, and Akaike Information Criterion (AIC) values were used to compare different CFA models. Three models of the de-professionalization and demoralization frameworks were compared. The first model constructed was a two-factor model of de-professionalization and demoralization (Appendix C). The fit of this model was less than adequate (CFI = 0.616, RMSEA =

0.046, AIC = 134989.38). To improve fit, and based on the theoretical framework of teacher de-professionalization and demoralization, two items related to collegiality were removed from the de-professionalization factor based on their low estimates. This suggests that elements of collegiality may be better conceptualized as elements of professionalism rather than professionalization. One de-professionalization item, worry related to student test performance, was moved to the demoralization factor. In addition, the second model conceptualized teacher demoralization as a bi-factor construct (Appendix D) with a perception of students and teacher worry and stress being subfactors of a general teacher demoralization factor. The fit of this model was adequate and an improvement over the two-factor measurement model (CFI = 0.902, RMSEA = 0.024, AIC = 120745.16). Finally, a three-factor model of teacher de-professionalization and demoralization was assessed (Appendix E). The fit of this model was also adequate (CFI = 0.888, RMSEA = 0.026, AIC = 120745.16), although the fit was slightly less than the bi-factor model. The bi-factor model was used in initial structural models, however, the models were not stable and did not produce full estimates. The three-factor model of teacher de-professionalization and demoralization, which also had adequate fit, was stable within the full structural models, and the SEM results presented use this measurement model.

The Path of Teacher De-professionalization and Demoralization Intent to Leave, and Turnover

Teachers who cited accountability and assessment as a factor in turnover decision. An examination of overall comparative fit statistics (AIC and Bayesian Information Criterion- BIC) shows that a SEM relating teacher de-professionalization and

demoralization to teacher turnover and teacher intent to leave exhibits better overall fit in the data set containing observations from teachers who cited accountability and assessment policies as a factor in their turnover decision (AIC = 56846.54, BIC = 57297.87) (see Figure 2.3) compared to the data set containing teachers who did not factor accountability and assessment in their turnover decision (AIC = 70661.06, BIC = 71135.58) (see Figure 2.4). The only significant relationship of the latent de-professionalization and demoralization variables to teacher intent to turnover, with no intent to turnover as a reference, was the relationship of the teacher worry and stress factor to intent to turnover (Standardized Estimate = 0.267, $p < .001$). This result is similar to the results for the relationships between the latent de-professionalization and demoralization factors and teacher turnover in this model (Figure 2.3). In the accountability and assessment is a factor in turnover decision data set, the worry and stress factor of demoralization was a significant positive predictor of teachers leaving the profession (Standardized Estimate = 0.732, $p < .001$) and teachers moving schools (Standardized Estimate = 0.684, $p < .001$) (Figure 2.3). Intent to leave was not a significant predictor of either teachers leaving the profession or teachers moving schools.

When including teacher perception of de-professionalization and demoralization as predictors, several teacher demographic factors were also significantly related to teacher turnover in the group of teachers who cited accountability and assessment as a factor in their turnover decision. Late career teachers were significantly more likely to leave the profession compared to mid-career teachers (Standardized Estimate = 0.358, $p < .05$). Alternatively certified teachers were significantly more likely to leave the profession (Standardized Estimate = 0.600, $p < .001$) and were more likely to move

schools (Standardized Estimate = 0.606, p < .001) compared to teachers holding a regular certification. Teachers of color were significantly more likely to move schools compared to white teachers (Standardized Estimate = 0.398, p < .01).

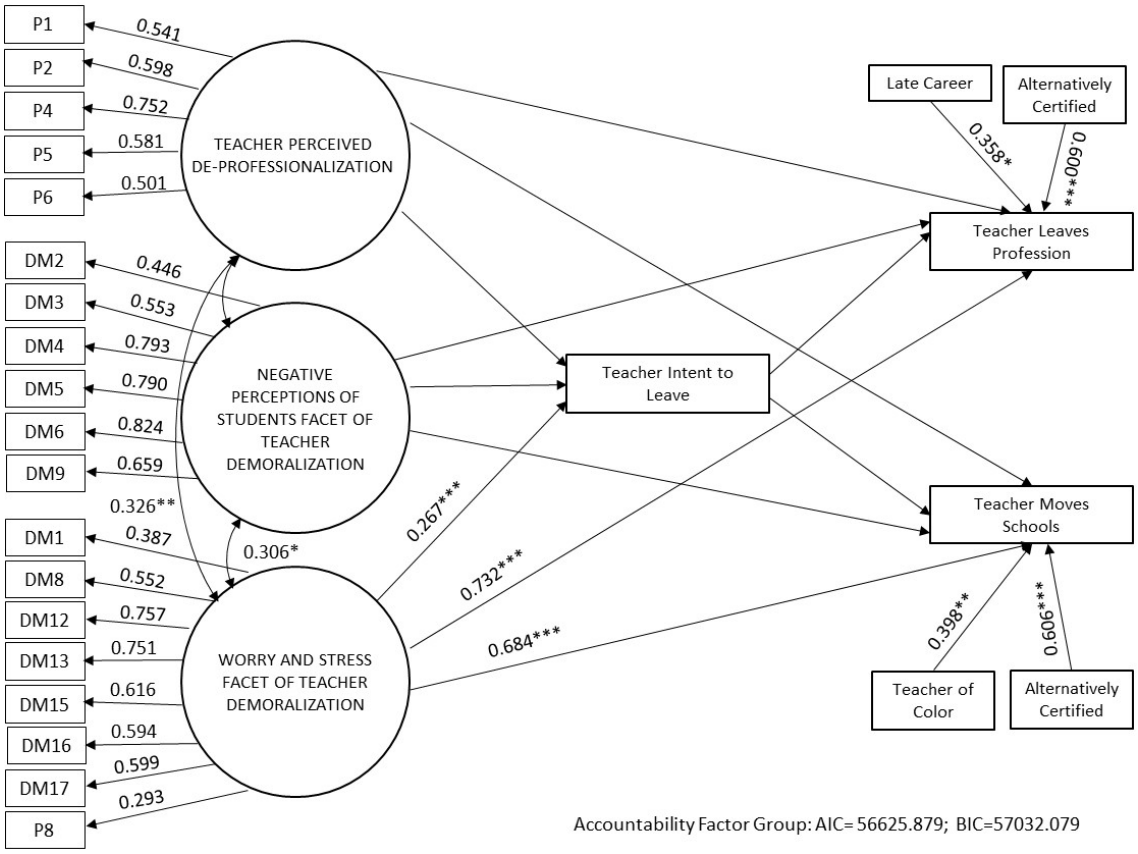

Figure 2.3: Structural Equation Model of the Relationship between Teacher Perception of De-professionalization and Demoralization and Teacher Intent to Leave and Turnover in Teachers who Cited Accountability and Assessment Policies as a Factor in their Employment Decision. All estimates between latent factors and indicators are significant (p < .001). Significant estimates between latent de-professionalization and demoralization factors and between latent factors and intent to leave and turnover are shown with asterisks (* p < .05, ** p < .01, *** p < .001).

Teachers who did not cite accountability and assessment as a factor in turnover decision. These results can be compared to the model results using data from teachers who did not cite accountability and assessment policies as a factor in their turnover decision. In contrast to the SEM model in teachers who cited accountability and assessment policies as a factor in their turnover decision, the latent de-professionalization and demoralization variables were not significant predictors of teachers leaving the profession or moving schools in teachers who did not cite accountability and assessment policies as a factor in their turnover decision (see Figure 2.4). However, a similar relationship to teacher worry and stress and intent to leave is observed in both models with worry and stress being a significant predictor of intent to leave (Standardized Estimate = 0.470, $p < .001$). Another similarity between models is that teacher intent to leave is not a significant predictor of turnover in the group of teachers who did not cite accountability policies as a factor in their turnover decision. Additionally, alternatively certified teachers are more likely to leave the profession (Standardized Estimate = 0.906, $p < .001$) and are more likely to move schools (Standardized Estimate = 0.774, $p < .001$) compared to teachers holding a regular certification in both teacher groups (see Figure 2.4).

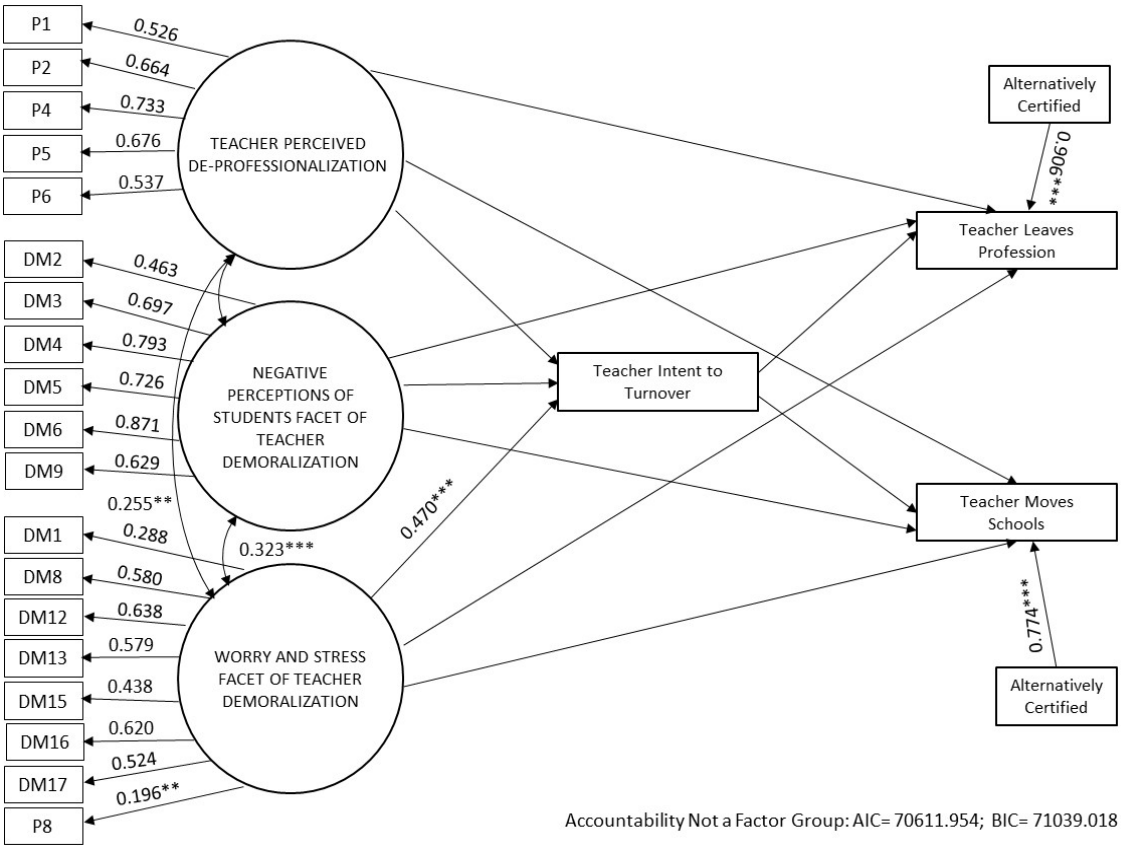

Figure 2.4: Structural Equation Model of the Relationship of Teacher De-professionalization and Demoralization to Teacher Intent to Leave and Teacher Turnover in Teachers Who Did Not Cite Accountability and Assessment Policies as a Factor in their Turnover Decision. All estimates are standardized. All estimates between latent factors and indicators and between latent factors are significant ($p < .001$, except P8, $p < .01$). Significant estimates between latent de-professionalization and demoralization factors and intent to leave and turnover are shown with asterisks (* $p < .05$, ** $p < .01$, *** $p < .001$).

Discussion

As the United States transitions from the federal accountability policy era of NCLB and into the new state accountability policy era under the *Every Student Succeeds Act* (ESSA), it becomes even more important to understand teachers' responses to accountability policy, particularly when this transition could feasibly lead to 50 different accountability approaches. Some scholars suggest that true accountability never existed at the federal level, contending that few schools or teachers ever experienced serious sanctions resulting from NCLB implementation (see Polikoff, Greene, & Huffman, 2017). However, from a policy implementation perspective, implementers' perception of a policy can be as important, if not sometimes more important, to the overall effects of the policy than the explicated policy itself (Bardach, 1977; Pressman & Wildavsky, 1979). The purpose of this study was to provide a framework for understanding the perceptions of teachers as primary accountability and assessment policy implementers. Specifically, this study describes the relationship between teachers' perceptions of accountability and assessment policies, as implemented in their schools at the height of federal accountability, and intent to leave and realized turnover. Policy-related turnover is an important phenomenon to understand given the well-established teacher shortages that are present in the United States' highest-need schooling contexts and overall rate of teacher churn in the United States (Clotfelder, Ladd, Vigdor, & Wheeler, 2007; Hanushek, Kain, & Rivkin, 2004; Imazeki, 2002; Ingersoll, 2001, 2003a, 2003b; Ingersoll, Merrill, & Stuckey, 2014; Jacob, 2007; Lankford, Loeb, & Wyckoff, 2002).

The model relating the teacher perception of de-professionalization and demoralization framework to teacher intent to leave and turnover exhibited an overall

better fit in a nationally representative group of teachers who cited accountability and assessment policy implementation as a factor in their decision to turnover compared to a group of teachers who did not. This result suggests that there is a relationship between teachers' perception of accountability and assessment policy implementation and the way in which teachers' perception of their work can intent to leave and realized turnover. This result echoes the finding of previous research that demonstrates that increased professionalization of teachers as defined by increased autonomy over curriculum and instruction can mitigate some of the teacher turnover experienced by low-performing, NCLB sanctioned schools (Ingersoll, Merrill, and May, 2016).

This study builds on this finding by incorporating an affective component, teacher demoralization, to teachers' perception of accountability and assessment policies and to intent to leave and teacher turnover. Teacher demoralization, with emotional exhaustion as an endpoint, has been previously described in several qualitative studies, and parts of the construct have been assessed quantitively outside of the U.S. accountability and assessment policy context (Santoro, 2011a, 2011b; Skaalvik & Skaalvik, 2010). Previous work has also demonstrated that accountability policies, including NCLB, have had a negative effect on teachers' morale (Byrd-Blake et al., 2010; Finnegan & Gross, 2007; Mausethagen, 2013; Santoro, 2011a, 2011b). However, this study demonstrates that there is a significant relationship between teachers' disaffection and intent to leave their current position. Further, the relationship between teachers' perception of demoralization and both teachers leaving the profession and moving schools, even after the inclusion of teacher demographic factors, is only significant in teachers who cite accountability and assessment policies as a factor in their turnover decision. This result suggests that there

is a connection between a negative perception of accountability and assessment policies and teacher turnover that is primarily driven by demoralization, and aligns with previous work that describes a moral, ethical, and affective domain to teacher turnover (Santoro, 2013). Demoralization represents a terminal step in teachers' response to policy in which hopelessness, feelings of diminished control over their work, and emotional exhaustion can only be rectified through exit from their current position or from the profession altogether.

This study also demonstrates that turnover related to perception of accountability and assessment policies differs among teacher demographic groups. In teachers who cite accountability policies as a factor in their turnover decision, late career teachers were more likely than mid-career teachers to leave the profession. However, this relationship between career stage and leaving the profession was not seen in teachers who did not cite accountability policies as a factor in their turnover decision. Veteran teacher attrition is a problematic consequence of accountability and assessment policy implementation given the significant body of research that demonstrates that teaching experience throughout all career stages is positively associated with student achievement gains (Kini & Podolsky, 2016; Ladd & Sorensen, 2016; Papay & Kraft, 2015). Turnover of veteran teachers may particularly harm high-poverty, high-needs schools given that teacher experience has been linked to student achievement in these school contexts (Huang & Moon, 2009; Sass et al., 2012). Turnover of experienced teachers also negatively affects school organizations who lose a valuable resource of teacher leadership and mentorship for inexperienced teachers (Jackson & Bruegmann, 2009; Kini & Podolsky, 2016). In addition to the finding that late career teachers are more likely to leave the profession

when they have a negative perception of accountability policies, we also find that teachers of color are more like to move schools when they have a negative perception of accountability policies. Previous research has shown that this may not have an overall negative impact on staffing in high-needs schools because teachers of color are more likely to transfer to other high-needs schools compared to their white peers (Ingersoll & May, 2011a, 2011b). However, this finding warrants additional research to determine if this pattern of mobility is the same when teachers of color cite accountability and assessment policies as a reason for turnover. This study also provides a starting point for other areas of future research into school contextual factors that contribute to accountability-related teacher turnover.

Limitations and Future Research

This study adds to the understanding of teacher turnover during the federal era of accountability by examining the relationship between teachers' perception of de-professionalization and demoralization and intent to leave and realized turnover in groups of teachers who cite accountability and assessment as a factor in their turnover decision and those who did not. While this model makes important connections between teacher perceptions, particularly perceptions of the affective domain, and turnover decisions, the model is not without limitations. Teacher turnover is often related to school contextual factors including urbanicity, poverty rate, percent students of color, and school leadership (see Borman & Dowling, 2008; Boyd et al., 2005; Clotfelder, Ladd, & Vigdor, 2007; Guarino, Santibanez, & Daley, 2006; Ingersoll, 2001; Lankford, Loeb, & Wyckoff, 2002; Loeb, Darling-Hammond, & Luczak, 2005). However, no school contextual factors were included in this study. Future work could use the teacher de-professionalization and

demoralization framework as a starting point for building more complex models that include school contextual factors. Another limitation of this study is that it utilizes cross-sectional data from the height of the federal accountability policy era. Stronger conclusions regarding the effects of accountability and assessment policies on changes in teacher perception of their work and related turnover could be drawn through if the teacher perception of de-professionalization and demoralization framework was applied longitudinally from the pre-accountability policy era through the return to state-level accountability plans under ESSA.

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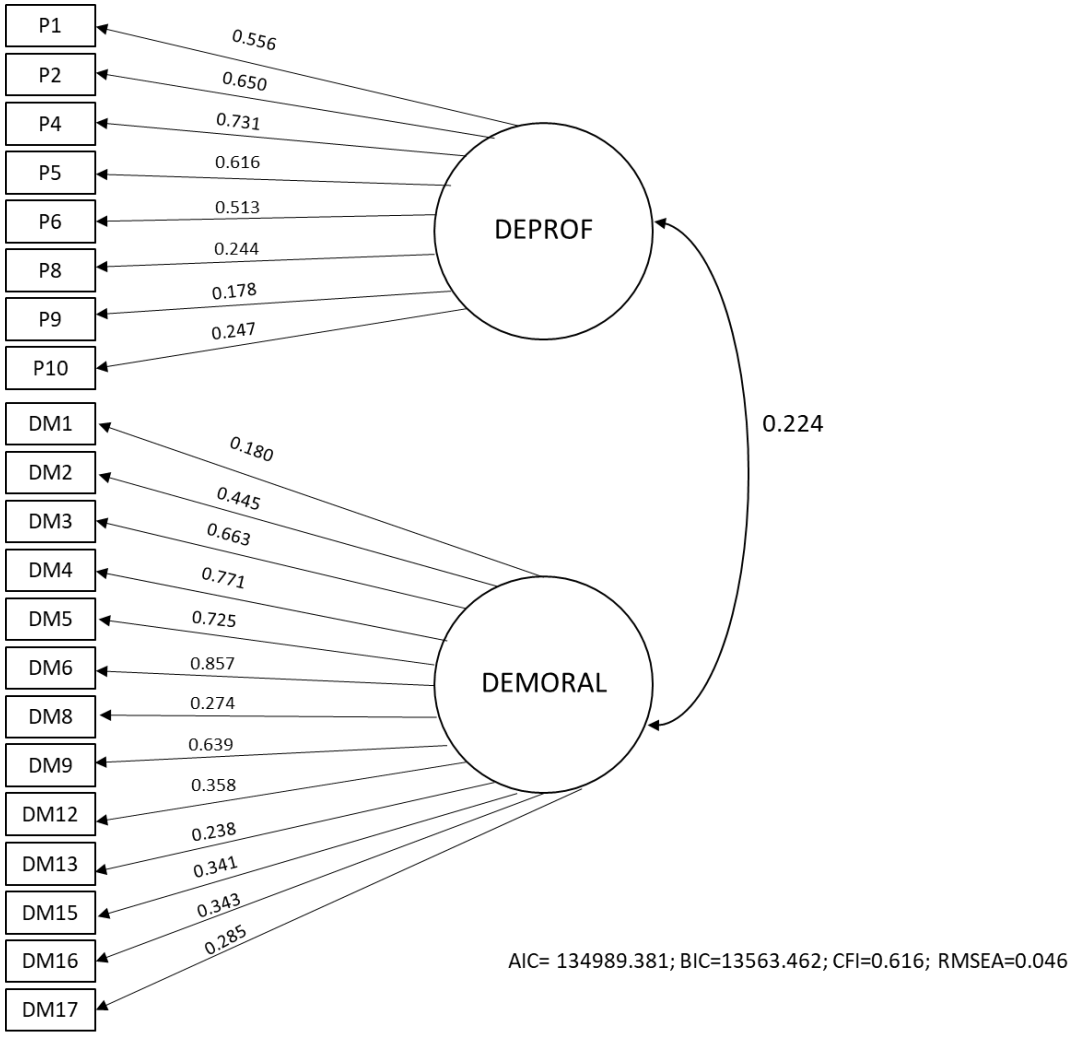
APPENDIX A

Descriptive Statistics of NCES Teacher Follow-up Survey Items Used to Construct Teacher Perception of Accountability and Assessment Policy Groups

	TFS Item		Pooled 08-09/12-13 TFS Sample (N = 2550)		
	2008-2009	2012-2013	Range	Mean	SD
Indicate the level of importance each item played in your decision to leave the position of a K-12 Teacher/leave last year's school					
Because I was dissatisfied with how student assessments/school accountability measures impacted my teaching or curriculum at last year's school.	LVAIM/ MVAIM	1721/1245	1 = Not at all important; 5 = Extremely important	1.86	1.31
Because I was dissatisfied with having some of my compensation, benefits, or rewards tied to the performance of my students at last year's school.	LVARW/ MVARW	1722/1246	1 = Not at all important; 5 = Extremely important	1.33	0.90
Because I was dissatisfied with the support I received for preparing my students for student assessments at last year's school.	LVASP/ MVASP	1723/1247	1 = Not at all important; 5 = Extremely important	1.51	1.07
Mean Composite of Accountability and Assessment Items				1.59	0.92

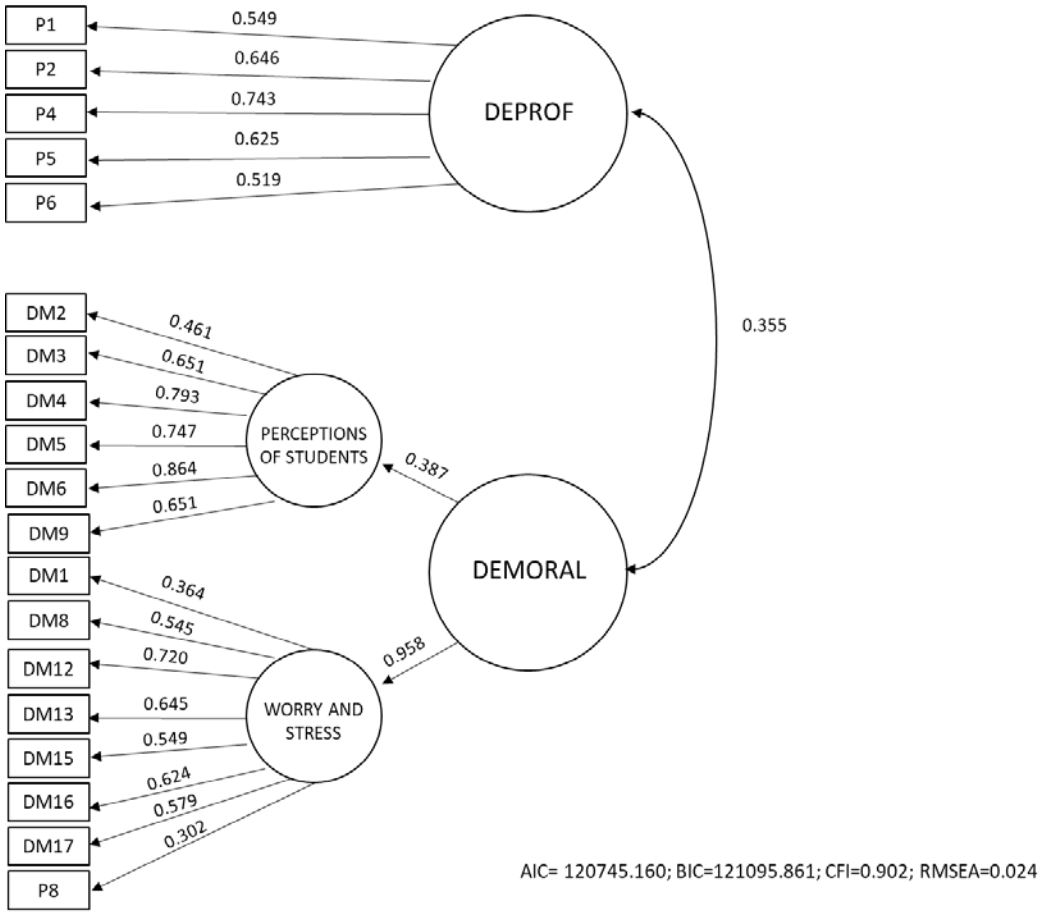
APPENDIX B

Two-Factor Confirmatory Factor Analysis of Teacher De-professionalization and Demoralization



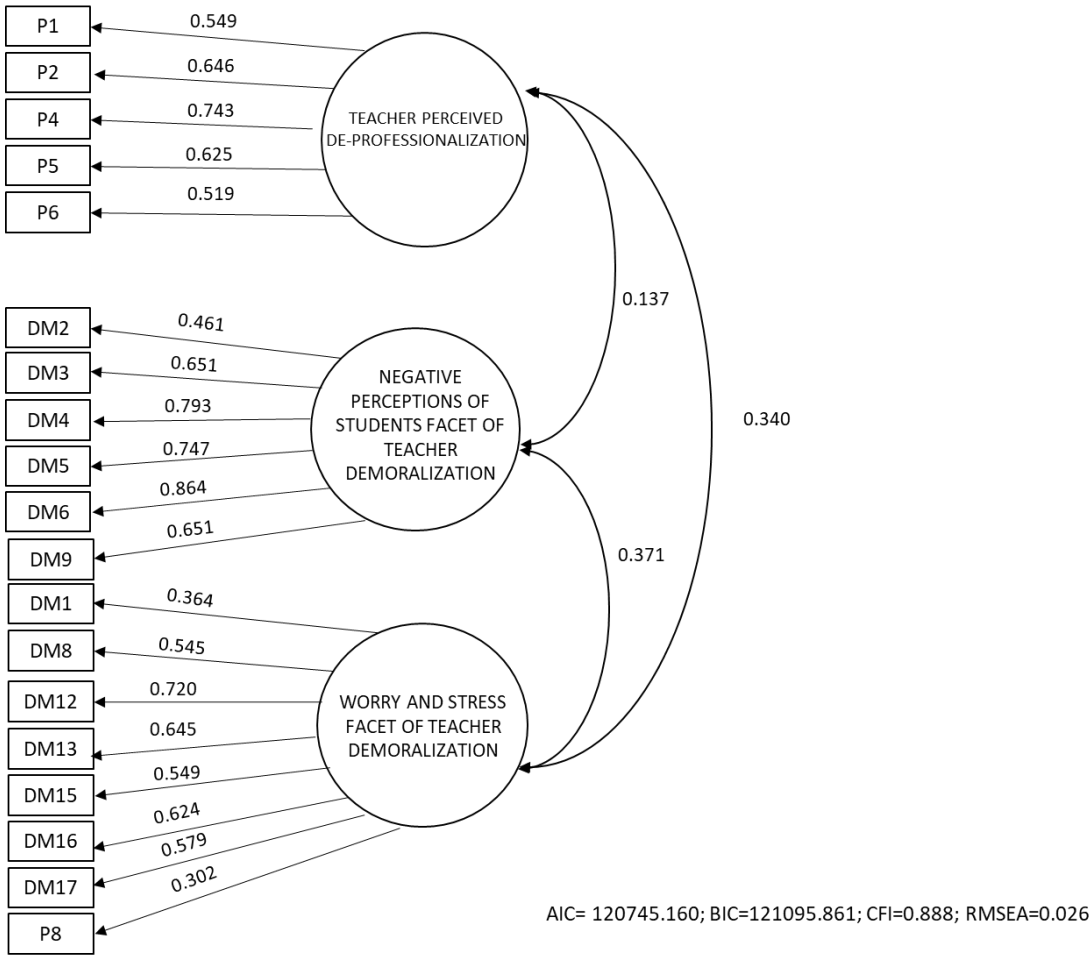
APPENDIX C

Bi-Factor Confirmatory Factor Analysis of Teacher De-professionalization and Demoralization



APPENDIX D

Three-Factor Confirmatory Factor Analysis of Teacher De-professionalization and Demoralization



Chapter IV- ARTICLE THREE

"De-professionalized and Demoralized: A Framework for Understanding Teacher Turnover in the Accountability Policy Era"

Abstract

This study examines the relationship between teachers' perception of de-professionalization and demoralization and turnover from the state accountability era of the mid-1990s through the height of the federal accountability era in the mid-2000s using a secondary analysis of the Schools and Staffing Surveys (SASS) and Teacher Follow-up Survey (TFS) restricted data from the National Center for Education Statistics. Hierarchical linear modeling with teachers clustered within SASS administrations was applied to compare changes in this relationship across time, this study also compares the relationship of perceptions of de-professionalization and demoralization and turnover between public and private school teachers. I found that public school teachers in urban schools, schools serving high percentages of students of color, and higher percentages of students qualifying for the Free and Reduced Lunch Program (FRLP) are more likely to perceive de-professionalization and demoralization as compared to private school teachers in the same school contexts and compared to teachers in suburban schools serving lower percentages of students of color and students qualifying for FRLP. I also found that principal shared and managerial leadership behaviors can reduce teacher perception of de-professionalization and demoralization in the accountability era. Finally, I found that the relationship of public school and private school teacher de-professionalization to turnover significantly decreased during the accountability policy

period, while the relationship of demoralization to turnover significantly increased during the accountability policy time period.

Keywords: Accountability, Labor Turnover, Teacher Attitudes

Introduction

Teacher turnover continues to be a pressing educational issue in the United States. In the past two decades overall attrition from the teaching profession has increased, and the modal years of experience of teachers has shifted from 15 years to only 5 years (Ingersoll, Merrill, & Stuckey, 2014). Teacher attrition from the profession is only one type of turnover that can cause instability; teacher mobility between schools can also cause instability at the organizational level. High-poverty schools and schools serving large percentages of students of color have higher rates of teacher mobility, with teachers moving to lower poverty level schools that serve fewer students of color, even though the rates of attrition in these schools is comparable their low-poverty, majority white counterparts (Ingersoll, 2002, 2003). Comparatively higher rates of teacher mobility in high-needs school contexts leads to high chronic instability rates or a condition of perpetual teacher churn in high-poverty schools serving large percentages of students of color, and this contextualized turnover shifts a discussion of teacher turnover from a traditional workforce and staffing concern to an equity concern in the United States (Boyd, Lankford, Loeb, & Wyckoff, 2005; Hanushek & Rivkin, 2010; Jacob, 2007; Johnson, Kraft, & Papay, 2012; Simon & Johnson, 2013). Chronic instability and high rates of cumulative turnover can have negative effects on student learning and on school organizations (Bryk, Gomez, Grunow, & LeMahieu, 2015; Holme, Jabbar, Germain, & Dinning, 2018; Holme & Rangel, 2012; Kraft, Marinell, & Yee, 2016). High rates of

turnover can lead to a loss of institutional knowledge, increased pressure on stayers who must continually support new or incoming teachers, incoherence in mission and vision, a constant break up and reforming of social ties and supports, all of which can have negative impacts on student learning and overall school improvement (Bryk et al., 2015; Bryk & Schneider, 2002; Bryk, Sebring, Allensworth, Luppescu, & Easton, 2009).

A large body of previous research has been dedicated to uncovering reasons for teacher turnover, and this research has described many teacher and school level context factors that contribute to both teacher attrition, leaving the profession, and teacher mobility, leaving one school for another. However, public schools within the United States also operate within a larger public policy context. Over the past two decades the educational policy landscape has been dominated by accountability policy, from the state level accountability era of the 1990s, through the height of the federal accountability era initiated by the *No Child Left Behind of 2001* (NCLB), and the entry into the *Every Student Succeeds Act* (ESSA) which returns accountability and assessment policies to the state level. The accountability reform movement was a response to the narrative of failing schools that reached its height in the 1990s and was perpetuated in the political arena by both President George Bush and President Barack Obama (Au & Apple, 2010; Superfine, 2005; Superfine, Gottlieb, & Smylie, 2012) and in the public arena by private education reformers like Bill Gates and Jeff Bezos, and in the public media by Philip Anschutz, producer of *Waiting for Superman (2010)* and *Won't Back Down* (2012) (Peck, 2015). This narrative of failure may have been reinforced by the accountability policies that were born from the narrative itself (Apple, 2006; Au & Apple, 2010; Burch, 2006, 2009). As NCLB driven educational accountability systems in states became more stringent in the

mid-2000s, the public's views of the education sector became increasingly negative with the prevalence of negative public views towards education reaching almost 47% by 2011 (see Rhodes, 2015; Wong, Wing, Martin, & Krishnamachari, 2018). The accountability reform movement placed performance pressure on schools and teachers and publicly labeled schools that did not meet standardized achievement goals as "failing." Frequently schools that were labeled as "failing" or "low performing" were those that served communities that historically faced significant structural inequities included high levels of poverty and racial segregation well before the accountability era (Adams & Adams, 2003; Au, 2009a, 2009b; Ladson-Billings, 2006; Milner, 2012). At the same time, teachers were assumed to be the leverage point of accountability policies; accountability would force teachers and schools to improve their practices or face sanctions that may range from public shaming to school restructuring that may result in loss of employment for both teachers and school leadership (Superfine, 2005). The theory of policy action of accountability reforms required that the work of teachers would change to improve student achievement and close achievement gaps between historically underserved student groups (Au & Apple, 2010). The work of teachers did change in the accountability era, however, their perception of the work and morale changed as well, although perhaps in unintended ways (Darling-Hammond, 2007; Milner, 2013; Santoro, 2011a, 2011b, 2013). Teachers' autonomy over the technical core of their work, curriculum and instruction, diminished as instructional practices were shifted to increase student outcomes on narrowly defined standardized test criteria (Abrams, Pedulla, & Madaus, 2003; Au, 2007; Cawelti, 2006; Darling-Hammond, 2007). The shift in instructional practices left teachers unable to serve other student needs that are more difficult to

measure such as social and emotional development, development of critical and democratic thinking skills, and development of cultural awareness and values (Ladson-Billings, 2006; Milner, 2012). Previous work has demonstrated a strong link between teacher dissatisfaction with their working conditions and turnover, and this study posits that the de-professionalization and demoralization of teachers in the accountability policy era has a significant relationship to turnover, and that this relationship increased as the U.S. transitioned from the state level accountability era of the 1990s to the federal accountability era initiated in the early 2000s. To understand teachers' perception of de-professionalization and demoralization and its changing relationship to teacher turnover throughout the scope of the accountability era in the U.S., I pose the following research questions:

1. How has the relationship of teachers' perception of de-professionalization and demoralization to turnover changed from the state to federal accountability eras? How does this relationship differ between public and private school teachers in the United States during this time period?
2. How do school organizational characteristics, including demographic characteristics and principal leadership characteristics, relate to teachers' perception of de-professionalization and demoralization?
3. How do teacher demographic factors and school organizational characteristics relate to teacher turnover during the accountability policy era in the United States?

Describing how the relationship between teachers' perception of their work and teacher turnover changes throughout both the state and federal accountability eras and comparing

this relationship between public school teachers, who were the primary leverage point of public accountability policies, and private school teachers, who may have been affected by accountability policy spillover but were not necessarily required to implement public accountability policies, allows for a broader understanding of changes in the overall teacher workforce during the accountability policy era. A broader understanding of the consequences of accountability policy on the teacher workforce is timely as states now think through their approach to the new accountability era under the *Every Student Succeeds Act* (ESSA).

Literature Review

A teacher's decision to turnover, whether to leave the profession or move to a position in another school, is complex and may be related to a host of teacher and school level factors. Adding the backdrop of accountability policies and politics adds another layer of complexity. To properly situate this study, the following literature review will first, discuss what is known about the relationship of teacher characteristics and school organizational characteristics to teacher turnover. Next, I will highlight what is known about the relationship of accountability policies to teacher turnover. Finally, I will introduce a teacher de-professionalization and demoralization framework for conceptualizing turnover in the accountability policy era in the United States.

Characterizing Teacher Turnover

Overall teacher turnover at an organizational level is the result of two processes: teacher attrition, or leaving the profession, and teacher mobility, teachers moving from one school to another (Ingersoll, 2001a, 2001b). Neither process is blanketly negative. Some level of turnover is normal and even beneficial to organizations, particularly if the

turnover decision results in a better organizational fit for the leaver or mover and their new organization or results in a better fit between a new employee and the organization. Turnover can also be a mechanism for introducing new innovations and ideas into an organization (Hausknecht & Holwerda, 2013; Hausknecht & Howard, 2009; Heavey, Holwerda, & Hausknecht, 2013). Turnover becomes problematic for school organizations when it creates a condition of chronic instability, when faculty and staff replacing leavers or movers are not effective or require a significant amount of training to reach the same effectiveness level, or when the turnover rate is so high that it places an unreasonable leadership burden on the faculty and staff who remain. Therefore, it is necessary to further characterize turnover with a discussion of who leaves and moves at what rate and for what reasons.

Teacher demographics and turnover. Teacher retention has varied based on individual teacher career stage, demographics, and certification. Teacher career stage has previously shown a connection to turnover decision. Teachers are more likely to leave the profession during the first five years of their career or after reaching retirement eligibility in the late part of their career, resulting in a well-established U-shaped curve for teacher attrition (Borman & Dowling, 2008; Ingersoll, 2001a; Johnson, Berg, & Donaldson, 2005; Leukens, Lyter, Fox, & Chandler, 2004). However, teachers in the early part of their career are more likely to move schools compared to late career teachers (Elfers, Plecki, & Knapp, 2006; NCES, 2005; Shen, 1997).

The prior evidence of the relationship between teacher demographics and turnover decision has been mixed and has changed over time. For example, female teachers have historically had higher rates of attrition from the profession and mobility between schools,

but this pattern of turnover is mediated by other factors including age, experience level, marital and family status, education level, and subject area taught (Murnane & Olsen, 1989; Ondrich, Pas, & Yinger, 2008; Murnane, Singer, & Willett, 1989; Stinebricker, 1998, 2002). Historically, teachers of color of both genders were retained at higher levels than white teachers (Adams, 1996; Allen, 2005; Borman & Dowling, 2008, Guarino et al., 2004, 2006; Ingersoll, 2001; Kirby, Berends, & Naftel, 1999; Murnane et al., 1989; Murnane & Olsen, 1989; Shin, 1995). However, this trend may be shifting with the 2004-2005 SASS data showing the highest single-year turnover rate for teachers of color (Ingersoll & May 2011a, 2011b). Teachers of color also have a different mobility pattern compared to white teachers. Teachers of color are more likely to move from schools serving large percentages of students of color and students of poverty into schools with similar demographics, while white teachers are more likely to move away from urban schools serving large numbers of students of color and poverty and into suburban schools with predominantly white, middle-class students (Ingersoll & May, 2011a, 2011b).

Teacher education and route to certification have also been previously shown to have a relationship to turnover. Teachers with alternative certification have become a significant portion of the teacher workforce, making up 25% of the total U.S. teaching force in 2013-2014 (Redding & Smith, 2016). However, teachers holding alternative certifications are also significantly more likely to turnover compared to teachers with traditional certifications (Boyd et al., 2011). Teachers holding advanced degrees, particularly in mathematics and science are also more likely to leave the profession compared to teachers with bachelor's degrees, and this may be correlated with their ability to improve their salaries by moving to other professional fields (Ondrich, Pas, & Yinger,

2008). The relationship of teacher characteristics to turnover should not be considered in isolation because nearly all of them are variable within different school contexts, and it is necessary to consider school context when discussing predictors of teacher turnover.

School organizational characteristics and teacher turnover. Some variation in teacher turnover has a relationship with school demographics and locale. Overall retention rates are lower in urban schools that serve high percentages of students of color and poverty. Rates of teachers leaving the profession is slightly higher in these school settings compared to suburban schools serving predominantly white student populations, however, the overall lower retention rates in high-needs schools are primarily due to higher rates of teacher mobility between schools. The general trend is that teachers leave schools with high percentages of students of color and poverty and move into schools with fewer students of color and lower poverty levels (Clotfelter et al., 2007; Guarino, Brown, & Wyse, 2011; Guarino et al., 2006; Hanushek, Kain, Rivkin, 2004; Imazeki, 2002; Ingersoll, 2001b; Loeb, Darling-Hammond, Luczak, 2005; Johnson & Birkeland, 2003; Podolsky et al., 2016; Scafidi, Sjoquist, & Stinebricker, 2007; Shen, 1997). Teachers are also more likely to leave urban schools for geographical reasons. Teachers are less likely to live in the urban areas where they teach compared to suburban teachers, and many relocate to teach nearer to the communities in which they live (Boyd. Lankford, Loeb, & Wyckoff, 2005, 2013; Rinke, 2011). Additional research also suggests that teachers who attended middle-class, white, suburban schools may leave schools with large numbers of students of color and poverty in favor of schools that are more representative of the schools that they attended (Rinke, 2011; Wronowski, 2017).

In addition to school demographics and locale, school leadership behaviors and teacher perception of school leadership are predictors of teacher turnover, with school leadership being the most consistent measure of teacher working conditions (Boyd et al., 2011; Brill & McCartney, 2008; Grissom, 2011; Guarino et al., 2006; Ingersoll, 2001a, 2001b, Ingersoll & May, 2012; Ladd, 2009; Wronowski, 2017). Principals create a climate that improves teacher retention through managerial, instructional, and shared leadership behaviors (Boyd et al., 2011; Darling-Hammond, 2003; Urick, 2016). Managerial leadership can improve teacher retention by improving school safety and order and locating and allocating resources necessary to achieve the overall mission and vision of the school (Borman & Dowling, 2008; Boyd et al., 2010; Bryk et al., 2010; Cornell & Mayer, 2010; Hallinger & Heck, 2010; Sebastian & Allensworth, 2012). Principal instructional leadership has an impact on teacher turnover by improving teacher satisfaction with regards to the technical core of their work. Improved teacher satisfaction in the technical realm of their work is achieved when principals engage in leadership behaviors that create a cohesive and supportive learning climate and improve teachers' self-efficacy in instruction (Grissom & Loeb, 2011; Horng, Klasik, & Loeb, 2010; Hirsch, Freitas, Church, & Villar, 2008; Ladd, 2009). Principals' shared leadership behaviors can also improve teacher retention by replacing principal-centered supervisory practices with behaviors directed at developing schools as communities of practice. Shared leadership across multiple school domains can improve teachers' motivation, job satisfaction, and organizational commitment, which are important antecedents to teacher retention (Billingsly & Cross, 1992; Hulpia, Devos, & Rosseel, 2009; Johnson, Kraft, & Papay, 2012; Marks & Printy, 2003; Shen, Leslie, Spybrook, & Ma, 2012; Somech, 2007; Urick,

2016; Wronowski, 2017). Teacher perception of administrator behaviors and support is equally important to their job satisfaction. Teachers who perceive that principals give them increased autonomy over their work and higher levels of administrative support are less likely to move to another school or leave the profession (Borman & Dowling, 2008; Guarino et al., 2006; Ingersoll, 2001a; Ingersoll & May, 2012; Podolsky et al., 2016; Shen, 1997; Urick, 2016, Wronowski, 2017). Administrator support and increased teacher autonomy over their work may be especially critical to mitigating the external pressures placed on teachers in the accountability policy era (Ingersoll, Merrill, & May, 2016). The teacher perception of de-professionalization and demoralization framework describes how teachers' perception of the technical core of their work and their morale has changed during the accountability policy era.

Teacher Perception of De-professionalization and Demoralization Framework

A review of the literature examining teacher turnover highlights the complexities in understanding teacher turnover decisions. A multitude of teacher demographic factors, school organizational characteristics, and perceptions of their work have previously been connected to teacher turnover decisions. For that reason, it is useful to have a framework for characterizing changes in teacher perceptions of the technical core of the work and changes in their morale during the accountability policy era. A framework describing these changes can help to explain changes in turnover from the state to federal accountability periods in models that also account for teacher and school contextual factors. I propose that the unintended consequences of accountability policies can be described using a de-professionalization and demoralization framework. The inclusion of a teacher perception of de-professionalization and demoralization framework to turnover

models can assist in disentangling specific teacher perception-turnover relationships throughout the state and federal accountability policy periods and can provide information about the relationship of school leadership behaviors to teacher perceptions of their work and their turnover.

***Teacher perception of de-professionalization*.** The accountability policy era formalized a tension that exists between the role of teachers as bureaucratic agents and teachers as professionals (Ravtich, 2002; Smith and Larimer, 2014). NCLB is an example of this tension; on one hand, NCLB called for all teachers to be "highly qualified", supporting the notion that teaching is a profession that requires a specific set of knowledge, skills, and training. However, the accountability mechanism of NCLB limited teachers' and schools' evaluation to students' standardized test performance and specifically targeted teachers' practices as the leverage point for improvement on standardized tests (Kappler Hewitt, & Amrein Beardsley, 2016, p. 5; Superfine, 2005; Milner, 2013). The consequence was that curriculum and instruction practices were changed to focus on this narrow achievement criterion, frequently without the input of teachers, which resulted in a net de-professionalization of the teaching core in the United States (Baker et al., 2010; Figlio & Ladd, 2015; Ingersoll, Merrill, & May, 2016; Ingersoll & Collins, 2017; Darling-Hammond, 2007; Milner, 2013).

Accountability policies, particularly in the federal accountability era, emphasized standardized tests scores in mathematics and reading as measures of school quality, which often resulted in a narrowing of curriculum to focus on improving student scores in these areas. School curriculum design practices in the accountability era included adding additional courses in these areas, many of which were remedial coursework, often at the

expense of courses or time spent in non-tested subjects (see Abrams, Pedulla, & Madaus, 2003; Au, 2007, 2011; Calwelti, 2006; Jacob, 2005; Hursh, 2007; Koretz, 2008; Longo-Schmid, 2016, pp. 55-56; Nichols & Berliner, 2007; Renter et al., 2006; Rothstein, Jacobsen, & Wilder, 2008). Instructional strategies also changed in response to external accountability pressures. Enriching instructional practices, such as inquiry learning and culturally relevant pedagogy were frequently exchanged for "drill and grill" test preparation activities. (Au, 2007; Camp & Oesterreich, 2010; Longo-Schmid, 2016, p. 56; Malen & Rice, 2016). Teachers in the accountability policy era have expressed that they have diminished autonomy over curriculum and instruction and that narrowed curriculum and diluted instructional practices have created an ethical conflict with the ethos of the teaching profession and the development of students as critical citizens (Evans, Lee, & Thompson, 2016, p. 179; Long-Schmid, 2016, p. 63; Powell et al., 2009; Santoro, 2011b; Schoen & Fusarelli, 2008; Stillings, 2005). The perceived changes to the technical core of their work and autonomy over that work is also related to teachers' perception of demoralization which is best characterized as a disconnection from the moral rewards and ethic of the profession (Santoro, 2011a).

Teacher perception of demoralization. The idea that accountability policy has infringed on the ethos of the teaching profession is the foundation of the conception of teacher demoralization that I am positing here. Teacher perception of demoralization includes three facets: (1) the emphasis on standardized test outcomes places teachers in conflict with the values and ethics of the teaching profession, (2) teachers experience worry and stress due to external policy pressure, and value conflict combined with worry and stress can have emotional exhaustion as an endpoint, (3) teachers who work with

historically underserved students, including large percentages of students of color and/or students living in poverty may attribute failure on standardized assessments to external factors. First, the profession of teaching has long recognized an ethic of serving the best interests of students where student care, creativity and expression, and engagement in rigorous, critical curricular instructional activities are hallmarks of an overarching ethic of the teaching profession (Cuban, 2007; Frick, 2013, pp. 124-125; Lopez, 2013, pp. 183-187; Sahlberg, 2010). This disaffection caused by teachers' attempt to balance policy demands with value demands that appear to be in conflict can lead to decreased job satisfaction, a significant antecedent to turnover (Santoro, 2011b; Skalvik & Skalvik, 2011). Accountability policy can create value conflict in teachers, but it can also create pragmatic conflicts when accountability practices, such as paperwork and duties related to accountability and assessment, interfere with time spent on teaching (Byrd-Blake et al., 2010; Cuban, 2007; Kersaint et al., 2007; Koyama, 2012; Sahlberg, 2010; Santoro, 2011a, 2011b). Value conflict and potential school and teacher sanctions create an environment of additional worry and stress that negatively affects students and teachers (Abrams, Pedulla, & Madaus, 2003; Byrd-Blake et al., 2010; Santoro, 2011a; Skalvik & Skalvik, 2011; Tidwell, 2014). A common response to extended periods of worry, stress, and emotional exhaustion may also lead teachers to engage in external attribution of student failures to external factors such as poverty, students being unprepared for schooling, and lack of parent involvement (see Georgiou, Christou, Stavrinides, & Panaoura, 2002; Weiner, 1985). The endpoint of external attribution can be a type of "gaming" the system where teachers and schools avoid working with students, or even moving away from schools, they perceive will not be capable of achievement on

standardized tests due to external factors (Cawelti, 2006; Clotfelder, Ladd, Vigdor, & Diaz, 2004; Holme, Jabbar, Germain, & Dinning, 2018; Rice & Malen, 2016, p. 41).

In this study I propose that teacher perception of de-professionalization and demoralization will be positively related to teachers leaving the profession and teachers moving between schools. I also propose that principal leadership behaviors, including managerial, shared, and instructional leadership, will have a negative relationship to teacher perception of de-professionalization and demoralization, and that a teachers' negative perception of administrator support will have a positive relationship to these constructs. I predict that school urban school location, high percentage of students of color, and high percentage of students qualifying for the federal free/reduced lunch program will be positively related to teacher perception of de-professionalization and demoralization as these schools were more likely to be labeled as "failing" or "in need of improvement" due to structural inequities that existed in these school contexts prior to the accountability policy era (Adams & Adams, 2003; Darling-Hammond, 2007; Dixson, Royal, & Henry, 2014; Fusarelli, 2004; Malen & Rice, 2016). School and teacher factors that have previously shown a relationship to teacher turnover as described above were also included in the analytical models to account for turnover during the accountability period due to preexisting demographic factors. Finally, the relationships in this model (Figure 3.1) will be compared between public and private school teachers. Public schools were required to implement accountability policy mandates in the state and federal accountability eras. However, private schools have, with a few exceptions including Indiana, Louisiana, and Wisconsin schools who accept tax credit vouchers or scholarships, successfully resisted the use of state curriculum standards and high stakes

testing (National Conference of State Legislatures, 2014). Addition of a comparison group strengthens the inferences that can be made in models of complex, temporal phenomenon (Wong, Cook, & Steiner, 2015).

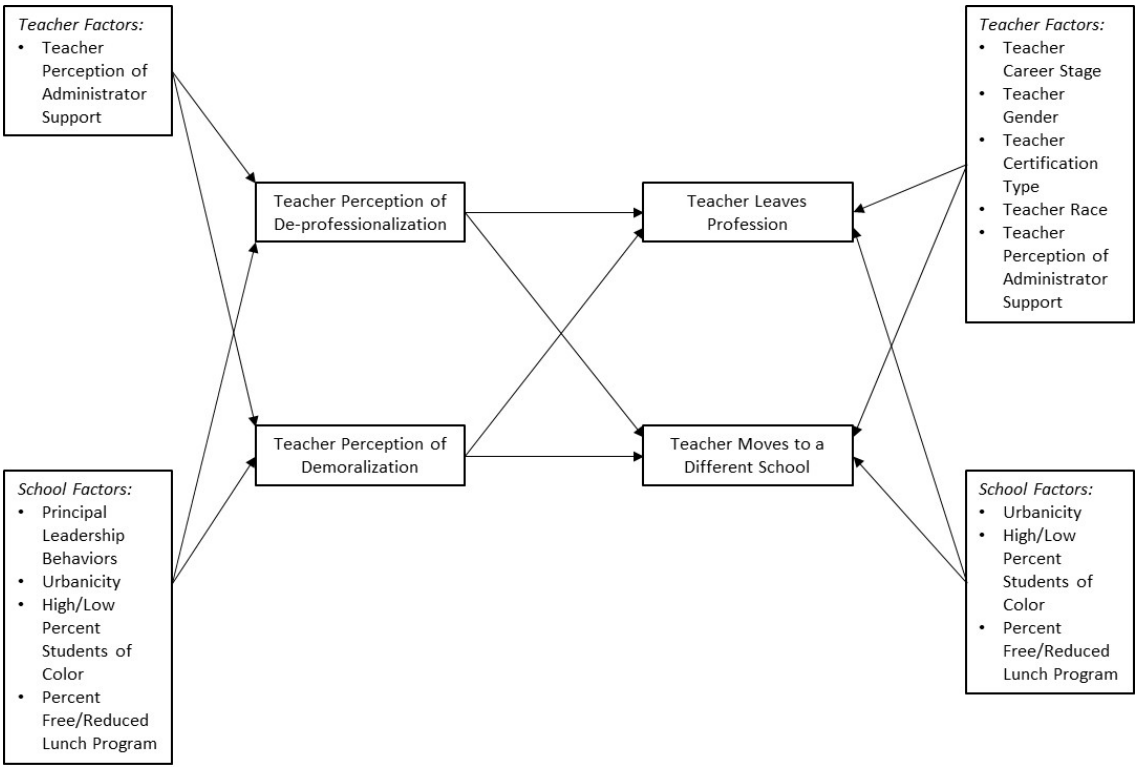


Figure 3.1: Theoretical Model of the Relationship of Teacher Perception of De-professionalization and Demoralization, Teacher Factors, and School Factors to Teacher Turnover during the U.S. Accountability Policy Era from 1993 to 2008.

Method

The purpose of this study is to describe the relationship of teacher perception of de-professionalization and demoralization and teachers leaving the profession or moving schools and to describe how that relationship changes from the state accountability policy era in the 1990s through the height of federal accountability era in the United States. The models presented in this article also describe the relationship of school organizational

features, including principal leadership behaviors and teacher perception of principal support, to teacher de-professionalization and demoralization while including historically significant predictors of teacher attrition from the profession and teacher mobility between schools.

Sample

This study is a secondary analysis of the Schools and Staffing Surveys (SASS) and Teacher Follow-up Surveys (TFS) from the 1993-1994/1994-1995, 1999-2000/2000-2001, 2003-2004/2004-2005, and 2007-2008/2008-2009 administrations collected by the National Center for Education Statistics (NCES). The SASS data are useful for several reasons. In addition to collecting a variety of demographic and educational data about teachers, the SASS teacher survey collects data regarding their perceptions of their workplace and their attitudes towards their work and towards school leadership (NCES, 1991, p. 2), and these items can be used to construct composites that represent teacher perception of de-professionalization and demoralization as described in this study. The SASS surveys collect this teacher information for public and private school teachers which allows for comparison of models between teacher groups. The SASS school administrator survey collects data on a range of principal-reported leadership behaviors that align to the managerial, shared, and instructional principal leadership domains described in this study (Urick, 2012, 2016; Urick & Bowers, 2014). Additionally, the TFS data includes teacher turnover information, classifying teachers as stayers in their current position, leavers from the profession, or movers between schools, from a sample of teachers that were surveyed in the SASS from the previous year. Combining the SASS and TFS data enables researchers to include variables from the SASS as predictors of

realized turnover rather relying on turnover intentions that do not always reflect actual turnover actions (Boyce, 2015; Podsakoff,, LePine, & LePine, 2007). Finally, the sampling procedures of SASS follow sampling design that is stratified at both the school and teacher levels to yield a nationally representative sample of schools and teachers for the year of the SASS administration (Tourkin et al., 2010). Teacher sample weights are provided for both the SASS (TFNLWGT) and the TFS (TFSWGT) to adjust the sample estimates to represent the framed target population (Tourkin et al., 2010). The sampling frame for the TFS consists of teachers who responded to the SASS teacher survey in the previous school year, and the sampling objective for the final TFS selection is to include teachers in three turnover categories, leavers, movers, and stayers (Graham et al., 2011). NCES has applied a multi-stage imputation procedure to address missing data at all levels for SASS data.

The public school samples for the SASS administrations included in the studies range from ~n = 8,969 – 10,202 schools and ~n = 46,700 – 56,350 teachers. The private school samples for the SASS administrations included in the study range from ~n = 2,620 – 3,620 schools and ~n = 6,640 – 10,760 teachers (NCES, n.d.). All sample estimates are rounded to maintain confidentiality per NCES requirements for restricted data use. The TFS data sets determined the final teacher sample sizes which ranged from ~3,100 to 33,000 public school teachers and ~700 to 6,500 private school teachers per study administration year.

Variables

Teacher perception of de-professionalization. Teacher de-professionalization is characterized as a loss of influence or control over the curriculum and instruction.

Representative SASS items included, “How much actual control do you have in your classroom… selecting textbooks and other instructional materials, …selecting teaching techniques, … evaluating students, …assigning homework?” SASS items included in the teacher perception of de-professionalization construct (see Appendix A) were recoded so that the highest Likert scale point represents the lack of influence or control over curriculum and instruction that is predicted to occur when curriculum and instruction practices were narrowed to improve student performance on standardized assessments mandated by NCLB (Cawelti, 2006; Darling-Hammond, 2007; Dever & Carlston, 2009; Hursh, 2007; Malen & Rice, 2016; Milner, 2013; Mintrop & Sunderman, 2009; Powell, Higgins, Aram, & Freed, 2009; Williamson & Morgan, 2009). To create a composite teacher de-professionalization variable for path analysis, individual items were z-score standardized, and the composite values were calculated as the mean of these standardized items (see Tables 3.1 and 3.2 for descriptive statistics). The reliabilities for the public school teacher perception of de-professionalization composites for the SASS administrations in this study range from $\alpha = 0.696 - 0.765$. The reliabilities for the private school teacher perception of de-professionalization composites for the SASS administrations in this study range from $\alpha = 0.734 - 0.776$.

Teacher perception of demoralization. In this study teacher perception of demoralization is operationalized as having a teacher component (see Appendix B) that includes decreased time for instruction due to accountability administrative tasks represented by the SASS item, “To what extent to you agree or disagree: routine duties and paperwork interfere with my job of teaching?” and worry and stress with emotional exhaustion as an endpoint, with representative SASS items including, “To what extent to

you agree or disagree… I worry about the security of my job because of the performance of my students on state or local tests, …the stress and disappointments involved with teaching at this school aren't really worth it, … I sometimes feel it is a waste of time to try to do my best as a teacher" (see Wronowski, 2017; Santoro, 2011a, 2011b; Skalvik & Skalvik, 2011). Teacher perception of demoralization is also conceptualized as having a student component that represents an external attribution of student failure on standardized tests (see Georgiou, Christou, Stavrinides, & Panaoura, 2002; Weiner, 1985). This attribution is operationalized using SASS items including, "To what extent is this a problem at your school…student apathy, ….lack of parental involvement, …student poverty, …students come to school unprepared to learn?" The full list of items used in the teacher perception of demoralization construct can be found in Appendix B. Each item used in the teacher perception of demoralization was z-score standardized, and the composite demoralization variable in the analysis was calculated as the mean of these z-score standardized items. The reliabilities for the public school teacher perception of demoralization composites for the SASS administrations in this study range from $\alpha = 0.775 - 0.831$. The reliabilities for the private school teacher perception of demoralization composites for the SASS administrations in this study range from $\alpha = 0.734 - 0.803$

Teacher factors. Teacher factors that have historically had a relationship to turnover were included as covariates on the teacher turnover variable (ATTRIT) in the analytic models. Categorical dummy-coded variables for teacher experience (Early Career = 0-5 years of experience, Mid-career = 6-15 years of experience, Late Career = > 15 years of experience) were created from the continuous SASS TOTEXPER variable in each data

set (Table 3.1), and the Mid-career experience range was the reference category in the analysis. Dichotomous variables were created for teacher gender (male is reference), alternative teacher certification (regular certification is reference), and teachers of color (white is reference) (Boyd et al., 2011; Ingersoll & May, 2011a, 2011b; Redding & Smith, 2016). Teacher perception of administrator support, framed in the negative, was included as a predictor of teacher perception of de-professionalization and demoralization. This variable was a single SASS item (see Appendix A) and was z-score standardized prior to being included in the analysis.

School factors. School factors that have historically had a relationship to teacher turnover were included as covariates on the teacher turnover variable in the analysis. These variables were also included as predictors of teacher perception of de-professionalization and demoralization based on the prediction that schools in urban areas, serving high percentages of students of color, and/or serving large percentages of students living in poverty would experience increased accountability pressure compared to suburban schools serving predominantly white and/or middle- to upper middle-class student populations (Adams & Adams, 2003; Darling-Hammond, 2007; Dixson, Royal, & Henry, 2014; Fusarelli, 2004; Malen & Rice, 2016). The SASS locale variable, URBAND12, was dummy coded into three variables for school location as urban, suburban, and rural, where suburban schools were the reference group. The PMINENR variable for percent minority student enrollment was used to create three dummy coded percent students of color variables. Examination of the histogram for this variable showed two primary peaks representing high student of color enrollment, 90-100% and low student of color enrollment, 0-10%. Schools with a percent student of color enrollment

from 11-89% were used as the reference group. Percent of students qualifying for free and/or reduced lunch, NSLAPP_S variable in SASS, was used as a proxy school poverty rate for public schools. This variable was not included in the private school models because this data was not available for private schools in all four SASS administrations included in this study. Principal leadership composites representing managerial, shared, and instructional leadership were included in the analysis as predictors of teacher perception of de-professionalization and demoralization (Urick & Bowers, 2014; Urick, 2016a, Grissom & Loeb, 2011; Hallinger, 2003, 2005; Hallinger & Heck, 2010). Items included in principal leadership composites are given in Appendix C. Items were z-score standardized, and managerial, shared, and instructional leadership composite variables were calculated as the mean of these z-score standardized items.

Dependent variables. Teacher turnover (ATTRIT) was used as the dependent variable in the analytical models. The ATTRIT variable from the TFS was coded as a three-level categorical variable (see Table 3.1) with teachers identified as leavers who left the teaching profession, movers who moved to a teaching position in another school, or stayers who stayed teaching in their current school (coded 0, 1, and 2, respectively). Stayers were used as the reference group in the analysis.

Table 3.1

Descriptive Statistics for Variables Included in Public School Models of the Relationship of Teacher De-professionalization and Demoralization and Teacher Turnover

Variables	**1993-1994 (n ~ 3,800)**				**1999-2000 (n ~ 33,800)**				**2003-2004 (n ~ 5,000)**				**2007-2008 (n ~ 3,100)**			
	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD
Teacher Turnover (0=leaver, 1=mover, 2=stayer)	0.00	2.00	1.01	0.88	0.00	2.00	1.78	0.56	0.00	2.00	1.03	0.85	0.00	2.00	1.38	0.81
Teacher Factors																
Teacher of Color	0.00	1.00	0.14	0.34	0.00	1.00	0.18	0.35	0.00	1.00	0.14	0.35	0.00	1.00	0.09	0.28
Female	0.00	1.00	0.70	0.46	0.00	1.00	0.67	0.47	0.00	1.00	0.73	0.44	0.00	1.00	0.73	0.44
Other certification	0.00	1.00	0.16	0.36	0.00	1.00	0.07	0.26	0.00	1.00	0.18	0.38	0.00	1.00	0.18	0.39
Early Career (0-5 Years)	0.00	1.00	0.38	0.49	0.00	1.00	0.27	0.44	0.00	1.00	0.40	0.49	0.00	1.00	0.60	0.49
Late Career (>15 years)	0.00	1.00	0.38	0.49	0.00	1.00	0.46	0.50	0.00	1.00	0.37	0.48	0.00	1.00	0.24	0.43
Perceives that administration is not supportive	-0.94	2.34	0.00	1.00	-0.96	2.29	0.00	1.00	-0.81	2.63	0.00	1.00	-0.71	3.10	-0.03	0.98
Teacher Perception of De-professionalization	-0.92	3.39	-0.01	0.68	-0.95	3.38	0.00	0.69	-0.78	3.49	0.13	0.74	-0.83	3.10	-0.02	0.68
Teacher Perception of Demoralization	-1.53	1.70	-0.15	0.60	-1.36	1.91	0.09	0.59	-1.32	1.87	0.01	0.59	-1.16	1.90	0.01	0.57
School Factors																
Urban	0.00	1.00	0.23	0.42	0.00	1.00	0.22	0.41	0.00	1.00	0.28	0.45	0.00	1.00	0.22	0.42
Rural	0.00	1.00	0.50	0.50	0.00	1.00	0.39	0.49	0.00	1.00	0.25	0.43	0.00	1.00	0.33	0.47
0-10% students of color	0.00	1.00	0.41	0.49	0.00	1.00	0.41	0.49	0.00	1.00	0.28	0.45	0.00	1.00	0.27	0.44
90-100% students of color	0.00	1.00	0.09	0.28	0.00	1.00	0.09	0.29	0.00	1.00	0.17	0.37	0.00	1.00	0.11	0.32
Percent of Students Qualifying for FRLP	0.00	100.0	39.62	29.56	0.11	100.0	37.05	27.32	0	100.0	41.30	28.66	0.00	100.0	44.10	27.50
Managerial Leadership	-4.41	0.68	-0.01	0.69	-5.11	0.60	0.01	0.68	-5.12	0.39	0.01	0.69	-4.58	0.35	0.02	0.59
Shared Leadership	-3.44	1.00	-0.01	0.75	-3.30	-3.30	1.23	0.01	-2.29	1.22	0.01	0.57	-2.45	1.16	0.02	0.61
Instructional Leadership	-3.27	1.13	-0.01	0.82	-2.66	-2.74	-0.02	0.61	-3.16	0.86	0.03	0.68	-3.18	0.77	0.03	0.65

Note: Unweighted descriptive statistics are reported. The TFSWGT was applied as part of the Mplus weight syntax in the analysis. All descriptive statistics were rounded to the hundredth place. No true zeros exist.

Table 3.2

Descriptive Statistics for Variables Included in Private School Models of the Relationship of Teacher De-professionalization and Demoralization and Teacher Turnover

Variables	**1993-1994 (n ~ 1,500)**				**1999-2000 (n ~ 6,500)**				**2003-2004 (n ~ 2,000)**				**2007-2008 (n ~ 700)**			
	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD
Teacher Turnover (0=leaver, 1=mover, 2=stayer)	0.00	2.00	1.14	0.89	0.00	2.00	1.68	0.68	0.00	2.00	1.03	0.90	0.00	2.00	1.11	0.92
Teacher Factors																
Teacher of Color	0.00	1.00	0.09	0.28	0.00	1.00	0.11	0.32	0.00	1.00	0.15	0.35	0.00	1.00	0.06	0.24
Female	0.00	1.00	0.74	0.44	0.00	1.00	0.74	0.44	0.00	1.00	0.77	0.42	0.00	1.00	0.76	0.43
Other certification	0.00	1.00	0.52	0.50	0.00	1.00	0.60	0.49	0.00	1.00	0.52	0.50	0.00	1.00	0.46	0.50
Early Career (0-5 Years)	0.00	1.00	0.51	0.50	0.00	1.00	0.35	0.48	0.00	1.00	0.49	0.50	0.00	1.00	0.37	0.48
Late Career (>15 years)	0.00	1.00	0.22	0.41	0.00	1.00	0.33	0.47	0.00	1.00	0.24	0.43	0.00	1.00	0.31	0.46
Perceives that administration is not supportive	-0.74	2.83	0.00	1.00	-0.68	2.31	0.00	1.00	-0.64	3.22	0.00	1.00	-0.61	3.75	0.06	1.04
Teacher Perception of De-professionalization	-0.79	3.67	0.01	0.68	-0.81	3.77	-0.00	0.68	-0.64	3.91	0.09	0.75	-0.63	3.63	0.03	0.70
Teacher Perception of Demoralization	-0.82	2.79	0.01	0.58	-0.73	3.06	0.00	0.54	-0.75	2.96	0.07	0.56	-0.71	2.67	0.04	0.54
School Factors																
Urban	0.00	1.00	0.43	0.49	0.00	1.00	0.45	0.50	0.00	1.00	0.38	0.48	0.00	1.00	0.41	0.49
Rural	0.00	1.00	0.21	0.41	0.00	1.00	0.12	0.33	0.00	1.00	0.11	0.31	0.00	1.00	0.10	0.30
0-10% students of color	0.00	1.00	0.52	0.50	0.00	1.00	0.54	0.50	0.00	1.00	0.53	0.50	0.00	1.00	0.40	0.49
90-100% students of color	0.00	1.00	0.06	0.25	0.00	1.00	0.05	0.21	0.00	1.00	0.07	0.26	0.00	1.00	0.06	0.23
Managerial Leadership	-6.06	0.41	0.05	0.69	-6.10	0.42	0.05	0.62	-7.20	0.27	0.05	0.62	-4.28	0.23	0.08	0.46
Shared Leadership	-3.47	0.86	0.04	0.77	-3.14	1.34	0.06	0.56	-3.23	1.19	-0.00	0.63	-2.24	1.36	0.04	0.62
Instructional Leadership	-4.67	0.55	0.03	0.80	-4.12	1.00	0.02	0.56	-4.00	0.96	0.05	0.54	-3.64	0.81	0.07	0.52

Note: Unweighted descriptive statistics are reported. The TFSWGT was applied as part of the Mplus weight syntax in the analysis. All descriptive statistics were rounded to the hundredth place. No true zeros exist.

Analytic Procedure

Hierarchical linear modeling (HLM) with teachers nested in SASS administration years was applied using in Mplus software using the twolevel random analysis type and MLR estimation (see procedures in Muthén & Muthén, 2015). Two separate HLM models were analyzed using public and private school SASS and TFS data from the 1993-1994/1994-1995, 1999-2000/2001-2002, 2003-2004/2004-2005, and 2007-2008/2008-2009 administrations. Teacher and school variables were both applied at the teacher level because most teachers in the TFS survey are an n = 1 per school, therefore clustering effects were not a significant consideration in the analysis. In the first models, all teacher and school factors were treated as fixed effects, and in the second models, the regression slopes of teacher perception of de-professionalization and demoralization on teacher attrition (leavers) and teacher mobility (movers) were treated as randomly varying between SASS administrations. To determine changes in overall teacher attrition and mobility over time, the ATTRIT variable was regressed on an orthogonally coded time variable. To determine changes in the relationship between teacher perception of de-professionalization and demoralization, the randomly varying teacher de-professionalization and demoralization-teacher attrition and de-professionalization and demoralization-teacher mobility slopes were regressed on an orthogonally coded linear time variable (see Mplus syntax in Appendix D).

Results

Predictors of Teacher Perception of De-professionalization and Demoralization

Predictors of Teacher Perception of De-professionalization. Principal leadership behaviors and a negative perception of administrator support were significant predictors

of teacher de-professionalization in both public and private school teachers during the accountability policy era (Table 3.3). Principal shared leadership was a significant negative predictor of teacher de-professionalization in public school teachers (B = -0.05, S.E. = 0.01, B/S.E. = -4.56) and private school teachers (B = -0.13, S.E. = 0.02, B/S.E. = -8.61). In contrast, principal instructional leadership was a significant positive predictor of teacher perception of de-professionalization in private school teachers (B = 0.01, S.E. = 0.02, B/S.E. = 7.23); the direction of the relationship of principal instructional leadership to teacher de-professionalization was the same for public school teachers, but the relationship was not significant. This result may indicate that teachers perceive principal instructional leadership as encroaching on the technical core of their work during the accountability policy era while shared leadership practices increases teachers' perception of autonomy over their work. Principal managerial leadership behaviors had no significant relationship to teacher perception of de-professionalization. A teachers' negative perception of principal support had a significant positive relationship to teacher perception of de-professionalization in the accountability policy era for both public (B = 0.24, S.E. = 0.02, B/S.E. = 16.06) and private school teachers (B = 0.18, S.E. = 0.01, B/S.E. = 16.56), and the magnitude of this relationship was almost twice that of the relationship of principal reported leadership behaviors to teacher perception of de-professionalization. All school demographic factors were significant predictors of public school teacher perception of de-professionalization. As predicted by previous literature, I found that urban school locale (B = 0.06, S.E. = 0.006, B/S.E. = 9.26), percent FRLP (B = 3.40, S.E. = 0.25, B/S.E. = 13.70), and high percent student of color enrollment (B = 0.04, S.E. = 0.001, B/S.E. = 28.20) were all significant positive predictors of public

teacher perception of de-professionalization during the accountability policy era in the United States. Conversely, rural school locale (B = -0.08, S.E. = 0.006, B/S.E. = -13.06) and low percent student of color enrollment (B = -0.08, S.E. = 0.006, B/S.E. = -18.76) were significant negative predictors of teacher perception of de-professionalization during this time period. In contrast to the results for public school teachers, urban school locale (B = -0.01, S.E. = 0.004, B/S.E. = -2.53) was a significant negative predictor of private school teacher de-professionalization, and low percent students of color was a positive predictor of private school teacher de-professionalization (B = 0.01, S.E. = 0.006, B/S.E. = 2.30). This result could indicate that private school teachers face different pressures than public school teachers, and private school teachers face increasing school community expectations when they serve predominantly white students.

Predictors of Teacher Perception of Demoralization. Principal leadership behaviors were also significant predictors of teacher perception of demoralization (Table 3.3). As was the case with teacher perception of de-professionalization, principal shared leadership was a significant negative predictor of teacher perception of demoralization for both public school teachers (B = -0.06, S.E. = 0.01, B/S.E. = -5.07) and private school teachers (B = -0.04, S.E. = 0.02, B/S.E. = -2.09). However, principal managerial leadership was also a significant negative predictor of demoralization in both public (B = -0.02, S.E. = 0.006, B/S.E. = -3.26) and private school teachers (B = -0.07, S.E. = 0.0047, B/S.E. = -9.53), and this domain of leadership was not predictive of teacher de-professionalization. Principal instructional leadership was also a significant negative predictor of private teacher perception of demoralization (B = -0.41, S.E. = 0.01, B/S.E. = -3.64) but was not significantly related to public school teacher perception of

demoralization. Unlike the relationship of principal leadership behaviors to teacher demoralization, a negative perception of administrator support was significant positive predictor of teacher demoralization for public (B = 0.40, S.E. = 0.04, B/S.E. = 10.83) and private school teachers (B = 0.47, S.E. = 0.04, B/S.E. =13.30). For public school teachers, all school demographic factors were significant predictors of teacher perception of demoralization. Public school teachers in urban and rural schools were more likely to perceive demoralization compared to suburban school teachers, as were public school teachers in schools serving higher percentages of students qualifying for the FRLP and in schools with high percentages of students of color (see Table 3.3). Private school teachers in urban schools were less like to perceive demoralization compared to private school teachers in suburban schools. This relationship is opposite the relationship for public school teachers. However, similar to public teachers, private school teachers in rural schools were also more likely to experience demoralization compared to suburban private school teachers (see Table 3.3). Also, similar to public school teachers, private school teachers working in schools with high percentages of students of color were more likely to perceive demoralization as compared to private school teachers working in schools with lower percentages of students of color.

Table 3.3

School Organizational Predictors of Teacher Perception of De-professionalization and Demoralization During the Accountability Policy Period in the United States from 1993 to 2008

	Public School Teachers				Private School Teachers			
	Teacher De-professionalization		Teacher Demoralization		Teacher De-professionalization		Teacher Demoralization	
	B (S.E.)	B / S.E.	B (S.E.)	B / S.E.	B (S.E.)	B / S.E.	B (S.E.)	B / S.E.
Variable								
Principal Managerial Leadership	-0.005(0.009)	-0.49	-0.02(0.006)***	-3.26	0.003(0.007)	0.41	-0.07(0.007)***	-9.53
Principal Instructional Leadership	0.003(0.01)	0.27	-0.003(0.006)	-0.48	0.01(0.002)***	7.23	-0.41(0.01)***	-3.64
Principal Shared Leadership	-0.05(0.01)***	-4.56	-0.06(0.01)***	-5.07	-0.13(0.02)***	-8.61	-0.04(0.02)*	-2.09
Negative Perception of Principal Support	0.24(0.02)***	16.06	0.40(0.04)***	10.83	0.18(0.01)***	16.56	0.47(0.04)***	13.30
Urban School	0.06(0.006)***	9.26	0.10(0.01)***	7.41	-0.01(0.004)**	-2.53	-0.04(0.01)***	-3.64
Rural School	-0.08(0.006)***	-13.06	0.05(0.007)***	6.82	-0.007(0.004)~	-1.66	0.01(0.006)*	2.03
Percent FRLP	3.40(0.25)***	13.70	13.43(1.79)***	7.75				
0-10% Students of Color	-0.08(0.004)***	-18.76	-0.13(0.02)***	-7.75	0.01(0.006)*	2.30	-0.13(0.007)***	-19.41
90-100% Students of Color	0.04(0.001)***	28.20	0.09(0.009)***	9.11	0.001(0.004)	0.264	0.06(0.006)***	9.57

Note: Free and Reduced Lunch Program data was not available for private schools for all time periods; this variable was omitted for private school models. For all estimates (* p < .05, ** p < .01, *** p < .001).

Predictors of Teachers Leaving the Profession or Moving Schools

Predictors of teachers leaving the profession during the accountability policy era. For public school teachers, teacher and school demographic factors were significant predictors of teachers leaving the profession (see Table 3.4). Female teachers were significantly more likely to leave the profession compared to male teachers, and early career teachers were more likely to leave the profession than mid-career teachers during the accountability policy era. Alternatively certified teachers were more likely to leave the profession compared to traditionally certified teachers. Public school teachers in urban schools and schools serving larger percentages of students who qualify for the FRLP were more likely to leave the profession compared to teachers in suburban schools and schools serving fewer students qualifying for the FRLP. However, public school teachers in rural schools were less likely to leave the profession compared to suburban public school teachers. Public school teacher perception variables were also significant predictors of teacher attrition from the profession. Public school teachers with a more negative perception of administrator support (B = 0.11, S.E. = 0.03, B/S.E. = 3.55), and higher perceptions of de-professionalization (B = 0.12, S.E. = 0.02, B/S.E. = 7.35) and demoralization (B = 0.19, S.E. = 0.03, B/S.E. = 7.42) were more likely to leave the profession (see Table 3.4, Model One).

A larger number of teacher demographic factors were significant predictors of private school teacher attrition from the profession (see Table 3.4). Female teachers, teachers of color, early career teachers, and alternatively certified teachers were all significantly more likely to leave the profession compared to the reference groups. However, late career private school teachers were significantly less likely to leave the

profession than the mid-career teacher reference group. In contrast to public school teachers, private school teachers in urban schools were significantly less likely to leave the profession, and private school teachers in rural schools were significantly more likely to leave the profession, compared to private school teachers in suburban schools. As was observed for public school teachers, private school teacher perceptions were also significant predictors of attrition from the profession. For private school teachers, a negative perception of administrator support (B = 0.17, S.E. = 0.05, B/S.E. = 3.37), perception of de-professionalization (B = 0.17, S.E. = 0.03, B/S.E. = 5.48), and perception of demoralization (B = 0.31, S.E. = 0.02, B/S.E. = 13.08) were all associated with increased rates of leaving the profession.

Changes in teacher attrition across the accountability policy era. Beyond identifying school and teacher context factors that were related to teacher attrition during the policy era, this study also set out to determine if the relationship between teachers' perception of their work and attrition from the profession changed as accountability policies became more pervasive as they diffused up from the state to the federal policy level, and in many states, became more consequential for schools as federal sanctions could be issued for poor school performance. The overall rate of public and private school teachers leaving the profession did not change across the state and federal accountability eras, and the rate of private school teacher (B = -0.05, S.E. = 0.001, B/S.E. = -41.34) and public school teacher (B = -0.02, S.E. = 0.003, B/S.E. = -6.85) attrition as predicted by their perception of de-professionalization significantly decreased as accountability policy evolved from the state to federal levels (see Table 3.4, Model Two). However, the rate of public school teachers (B = 0.02 S.E. = 0.008, B/S.E. = 2.29) and private school teachers

(B = 0.01 S.E. = 0.001, B/S.E. = 25.23) leaving the profession as predicted by their perception of demoralization significantly increased during this time period. Contrary to the predictions of the study, the rate of private school teachers leaving the profession as predicted by demoralization was higher than the rate of public school teachers.

Table 3.4

Teacher and School Contextual Predictors of Public and Private School Teachers Leaving the Profession and Changes in Teacher De-Professionalization and Demoralization Predicted Leaving Across the State and Federal Accountability Era in the U.S.

	Public School Teachers				Private School Teachers			
	Model One		Model Two		Model One		Model Two	
	B (S.E.)	B / S.E.	B (S.E.)	B / S.E.	B (S.E.)	B / S.E.	B (S.E.)	B / S.E.
Variable								
Female Teacher	0.09(0.030)**	2.96	0.09(0.03)**	2.90	0.03(0.02)~	1.84	0.04(0.02)*	2.50
Teacher of Color	-0.00(0.08)	-0.02	-0.02(0.06)	-0.32	0.15(0.03)***	4.44	0.15(0.04)***	4.01
Early Career (0-5 years)	0.41(0.050)***	8.32	0.41(0.05)***	8.25	0.82(0.10)***	8.20	0.81(0.10)***	8.35
Late Career (>15 years)	0.10(0.14)	0.74	0.09(0.13)	0.70	-0.12(0.05)*	-2.29	-0.12(0.06)*	-2.11
Alternatively Certified	0.07(0.05)~	1.48	0.08(0.04)*	2.17	0.40(0.04)***	9.34	0.40(0.04)***	10.95
Negative Perception of Administrator Support	0.11(0.03)***	3.55	0.11(0.03)***	3.82	0.17(0.05)***	3.37	0.16(0.05)***	3.53
Teacher Perception of De-professionalization	0.12(0.02)***	7.35			0.17(0.03)***	5.48		
Teacher Perception of Demoralization	0.19(0.03)***	7.42			0.31(0.02)***	13.08		
Urban School	0.09(0.32)**	2.96	0.09(0.03)***	3.20	-0.11(0.06)*	-1.96	-0.12(0.06)*	-2.02
Rural School	-0.05(0.02)***	-2.73	-0.05(0.03)*	-2.19	0.17(0.07)*	2.51	0.15(0.08)*	2.01
Percent FRLP	0.002(0.001)*	2.03	0.002(0.001)*	2.05				
0-10% Students of Color	-0.06(0.09)	-0.60	-0.06(0.09)	-0.72	-0.06(0.12)	-0.51	-0.06(0.12)	-0.51
90-100% Students of Color	0.01(0.08)	0.09	0.01(0.07)	0.16	-0.7(0.10)	-0.71	-0.09(0.10)	-0.94
Time			-0.05(0.05)	-1.039			-0.02(0.03)	-0.71
De-professionalization on Leavers*Time			-0.04(0.001)***	-35.11			-0.05(0.001)***	-41.34
Demoralization on Leavers*Time			0.02(0.01)*	2.29			0.01(0.00)***	25.23
-2LL	1202895.23		1202852.89		169438.99		169433.18	
AIC	1203043.23		1203016.89		169570.99		169585.18	

Note: Free and Reduced Lunch Program data was not available for private schools for all time periods; this variable was omitted for private school models. For all estimates (* p < .05, ** p < .01, *** p < .001).

Predictors of teachers moving schools during the accountability policy era. Several teacher and school demographic factors were significant predictors of public school teachers moving schools across the state and federal accountability eras (see Table 3.5). As found in previous studies of teacher mobility, early career public school teachers were significantly more likely to move schools, and late career public school teachers were significantly less likely to move schools compared to mid-career teachers. I also found that alternatively certified teachers were more likely to move schools compared to teachers with a traditional certification. Like the results for teachers leaving the profession, public school teachers in schools serving larger percentages of students who qualify for the FRLP were significantly more like to move schools compared to public teachers in schools serving fewer students qualifying for the FRLP. In contrast to the results for teachers leaving the profession, public school teachers in schools serving a high percentage of students of color and working in urban schools were less likely to move schools compared to public teachers working in suburban schools and schools serving lower percentages of students of color during this time period. Public school teacher perception variables were also significant predictors of teacher mobility between schools. Public school teachers with a more negative perception of administrator support (B = 0.16, S.E. = 0.03, B/S.E. = 6.26), and higher perceptions of de-professionalization (B = 0.11, S.E. = 0.01, B/S.E. = 9.82) were more likely to move schools (see Table 3.4, Model One). However, unlike the relationship of public school teacher perception of demoralization to teachers leaving the profession during the accountability policy era, public school teacher perception of demoralization was not a significant predictor of teacher mobility (B = 0.07 S.E. = 0.04, B/S.E. = 1.76, p = 0.08).

Similar to the results for teacher attrition, a larger number of teacher demographic factors were significant predictors of private school teacher mobility between schools (see Table 3.5). Female private school teachers and early career private school teachers were significantly more likely to move schools in the U.S. accountability era compared to the reference groups. However, late career private school teachers and private school teachers of color were significantly less likely to move schools compared to reference groups. In contrast to public school teachers, private school teachers in urban schools and rural schools were significantly more likely to move schools compared to private school teachers in suburban schools during the accountability era. As was observed for public school teachers, private school teacher perceptions were also significant predictors of attrition from the profession. For private school teachers, a negative perception of administrator support (B = 0.22, S.E. = 0.02, B/S.E. = 9.89), perception of de-professionalization (B = 0.15, S.E. = 0.03, B/S.E. = 5.07), and perception of demoralization (B = 0.27, S.E. = 0.08, B/S.E. = 3.57) were all associated with increased rates of moving schools.

Changes in teacher mobility across the accountability policy era. The overall rate of public and private school teachers moving schools did not change significantly across the state and federal accountability eras. However, private school teacher (B = 0.02, S.E. = 0.004, B/S.E. = 4.63) mobility predicted by their perception of de-professionalization significantly increased across this time period. In contrast, public school teacher mobility as predicted by perception of de-professionalization significantly decreased during this period (B = -0.02, S.E. = 0.002, B/S.E. = -10.33). The opposite result was observed for the change in rate of teacher mobility as predicted by teacher

perception of demoralization. The rate of public school teacher mobility predicted by perception of demoralization significantly increased (B = 0.07, S.E. = 0.01, B/S.E. = 10.15) as U.S. accountability policy evolved from the state to federal levels. Conversely, the rate of private school teacher mobility predicted by teacher perception of demoralization significantly decreased (B = -0.06, S.E. = 0.003, B/S.E. = -17.76) during this time period, indicating that from 1993 to 2008, public school teachers were more likely to move schools due to an increase in perception of demoralization while private school teachers were more likely to move schools due to an increase in perception of de-professionalization. While teacher perception of demoralization was not a significant predictor of public school teacher mobility across the whole accountability policy era in the U.S., it became an increasingly significant predictor of public school teacher mobility as time went on. This correlates with the finding that overall teacher perception of demoralization increased as the U.S. transitioned from the state to federal accountability eras (see Chapter 2, this volume). This result is also congruent with the finding that at the height of the federal accountability era, in teachers who cite accountability as a factor in their turnover decision, teacher worry and stress is the only significant predictor of both public school teachers leaving the profession and moving schools (see Chapter 3, this volume).

Table 3.5

Teacher and School Contextual Predictors of Public and Private School Teachers Moving Schools and Changes in Teacher De-Professionalization and Demoralization Predicted Teacher Mobility Across the State and Federal Accountability Era in the U.S.

	Public School Teachers				Private School Teachers			
	Model One		Model Two		Model One		Model Two	
	B (S.E.)	B / S.E.	B (S.E.)	B / S.E.	B (S.E.)	B / S.E.	B (S.E.)	B / S.E.
Variable								
Female Teacher	0.06(0.05)	1.24	0.06(0.04)	1.40	0.11(0.04)**	2.76	0.11(0.04)**	3.02
Teacher of Color	0.003(0.04)	0.07	-0.005(0.04)	-0.14	-0.25(0.11)*	-2.39	-0.25(0.11)*	-2.38
Early Career (0-5 years)	0.61(0.03)***	19.20	0.61(0.03)***	19.05	0.65(0.13)***	4.89	0.66(0.14)***	4.80
Late Career (>15 years)	-0.67(0.05)***	-14.06	-0.68(0.04)***	-15.20	-0.61(0.07)***	-8.83	-0.61(0.06)***	-10.09
Alternatively Certified	0.13(0.03)***	5.06	0.13(0.03)***	4.88	-0.17(0.10)~	-1.71	-0.18(0.10)~	-1.73
Negative Perception of Administrator Support	0.16(0.03)***	6.26	0.16(0.03)***	6.39	0.22(0.02)***	9.89	0.22(0.01)***	24.23
Teacher Perception of De-professionalization	0.11(0.01)***	9.82			0.15(0.03)***	5.07		
Teacher Perception of Demoralization	0.07(0.04)~	1.76			0.27(0.08)***	3.57		
Urban School	-0.10(0.05)~	-1.91	-0.10(0.05)*	-2.00	0.24(0.05)***	5.38	0.24(0.05)***	4.80
Rural School	-0.02(0.03)	-0.66	-0.02(0.03)	-0.78	0.35(0.03)***	10.74	0.34(0.02)***	15.69
Percent FRLP	0.005(0.001)***	8.82	0.005(0.001)***	8.89				
0-10% Students of Color	-0.11(0.07)~	-1.65	-0.11(0.07)~	-1.72	-0.17(0.05)***	-3.29	-0.17(0.05)***	-3.52
90-100% Students of Color	-0.21(0.06)***	-3.60	-0.21(0.06)***	-3.59	0.22(0.15)***	9.89	0.22(0.16)	1.37
Time			-0.03(0.01)~	-1.92			-0.02(0.03)	-0.72
De-professionalization on Movers *Time			-0.02(0.00)***	-10.33			0.02(0.004)***	4.63
Demoralization on Movers*Time			0.07(0.01)***	10.15			-0.06(0.003)***	-17.76
-2LL	1209699.88		1209687.90		169438.99		169433.18	
AIC	1209843.88		1209851.90		169570.99		169585.18	

Note: Free and Reduced Lunch Program data was not available for private schools for all time periods; this variable was omitted for private school models. For all estimates (* p < .05, ** p < .01, *** p < .001).

Discussion

The purpose of this study was to determine how teacher turnover has changed throughout the state accountability era of the mid-1990s through the height of the federal accountability era in the first decade of the 21st century. This study used a teacher perception of de-professionalization and demoralization framework, based on conceptual and qualitative descriptions of the unintended consequences of accountability policy on teachers' perception of their work, to predict changes in teacher turnover throughout the accountability policy era in the United States. Previous work has demonstrated that teacher perception of de-professionalization and demoralization increased as the U.S. transitioned from the state to federal accountability periods (see Chapter 2, this volume), and this study reaffirms that public school teachers in urban schools and schools with higher percentages of students of color and students qualifying for the FRLP are more likely to perceive de-professionalization and demoralization compared to teachers in suburban schools serving predominantly white and higher socioeconomic students. This same pattern of school context factors relating to teacher perception of de-professionalization and demoralization is not seen in private school teachers. For example, private school teachers in urban schools are less likely to perceive both de-professionalization and demoralization compared to private school teachers in suburban schools. In addition, private school teachers' perception of de-professionalization is not related high percent enrollment of students of color. This suggests a different locus of pressure may be operating in public and private schools during the accountability era. Private school organizations have resisted using the same accountability policies and assessments used to rate public schools, contending that doing so would prevent them

from innovating for their consumers and further contending that private schools are already subject to free market accountability (Kelly & Scafidi, 2013; National Conference of State Legislatures, 2014). In contrast, public schools have been subject to public policy measures for accountability and measures of quality, first at the state level and then at the federal level. While all public schools are mandated implementers under federal accountability policy, not all schools experience the same levels of accountability pressure. Public schools in urban locales that have historically served large percentages of students of color and students living in poverty where more likely to be labeled as failing in the era of accountability due to pre-existing structural and educational opportunity inequities (Adams & Adams, 2003; Darling-Hammond, 2007; Dixson, Royal, & Henry, 2014; Fusarelli, 2004; Ladson-Billings, 2006; Malen & Rice, 2016; Martinez-Garcia, LaPrairie, & Slate, 2011; Milner, 2012; Orfield & Lee, 2005). The connection of school characteristics to public school teacher perception of de-professionalization and demoralization to high-needs schooling contexts could plausibly be explained by increased accountability pressure.

Regardless of the source of pressure, this study demonstrates that principal leadership behaviors can mitigate teacher perception of de-professionalization and demoralization. Principal shared leadership behaviors have a negative relationship with teacher de-professionalization and demoralization in both public and private school teachers, and principal managerial leadership has a negative relationship with teacher demoralization for both groups of teachers. Teachers' perception of a lack of support from administrators was positively related to perception of de-professionalization and demoralization. This finding reaffirms the significant body of research that demonstrates

the importance of principal leadership behaviors and teachers' perception of those behaviors in contributing to teachers' overall perception of their work and workplace (Boyd et al., 2011; Billingsly & Cross, 1992; Brill & McCartney, 2008; Grissom, 2011; Guarino et al., 2006; Hulpia, Devos, & Rosseel, 2009; Johnson, Kraft, & Papay, 2012; Marks & Printy, 2003; Shen, Leslie, Spybrook, & Ma, 2012; Somech, 2007; Urick, 2016; Wronowski, 2017). Principals may also play an important role in defining teachers' perceptions of their work and their morale in the accountability policy era. By engaging in shared leadership practices with teachers during accountability policy implementation, principals may mitigate perceived infringements on the technical core of teachers' work by accountability policies. Teacher morale may also be improved through shared accountability policy implementation that ensures that policy mandates are not implemented in a way that fundamentally conflicts with the mission and values of the school (Diamond, 2007, 2012; Ingersoll & Collins, 2017; Ingersoll, Merrill, & May, 2016; Spillane, Parise, & Sherer, 2011).

Understanding the factors that contribute to or mitigate teachers' perception of de-professionalization and demoralization is an important undertaking because those perceptions are significant predictors of teachers leaving the profession and moving schools. However, in examining how the relationship between de-professionalization and demoralization and teacher turnover changed as accountability policy diffused up from the state to federal level, teacher perception of demoralization has a more significant effect on the distal outcome of teacher turnover. The rate of public school teachers leaving the profession or moving schools as predicted by perception of de-professionalization decreased across the policy period, and this echoes the finding that teachers perceived no

significant decrease in demand, control, and support work domains following NCLB implementation (Grissom, Nicholson-Crotty, & Harrington, 2014). However, the demand-control-support framework does not fully capture the worry, stress, and emotional exhaustion affective response that is operationalized in this study's demoralization construct. This result establishes the need to include measures of disaffection in future studies of teacher turnover (Santoro, 2011b, 2013; Skaalvik & Skaalvik, 2010, 2011).

Implications

The findings of this study have implications for both policy makers and educational leaders as policy implementers. The expressed intent of both state and federal accountability policies in the United States was to identify and diminish inequities in achievement outcomes. However, these policies have had unintended and negative consequences for teachers working in the very schools the policies were designed to improve (Darling-Hammond, 2007). Teacher perception of de-professionalization and demoralization increased as accountability policies evolved from the state to federal level (see Chapter 2, this volume), and these perceptions are related to teachers' decisions to leave the profession or move between schools. In addition, a negative accountability rating has also been shown to predict teacher mobility from schools with lower rankings to those with higher rankings, often creating dysfunctional turnover in school contexts that would benefit greatly from staff and faculty stability (Clotfelder et al., 2004; Holme et al., 2018). Understanding the ways in which accountability policies affect the teacher workforce is critical as states complete and implement their accountability plans under the new *Every Student Succeeds Act* legislation.

The findings of this study also have implications for practicing educational leaders and for those who prepare the next generation of educational leaders. This study shows that the ways in which principals engage in leadership behaviors and support their teachers through policy changes can affect teachers' perception of their work and their overall morale (Diamond, 2007, 2012; Spillane, Parise, & Sherer, 2011). However, the most current edition of the Professional Standards for Educational Leaders (see National Policy Board for Educational Administration, 2015) does not include guidance for preparing leaders to effectively implement policy in ways that are congruent with the other articulated leadership domains. The findings of this study show that this may be a necessary addition to principal preparation programs, and that practicing principals should use currently available research to inform their policy leadership practices.

Limitations and Areas of Future Research

The SASS and TFS have been used in several studies of teacher turnover because they provide rich contextual and perceptual data that can be directly linked to teacher's decision to stay in their current position, leave the profession, or move to a different school. However, the SASS and TFS surveys are not longitudinal, and using them to draw conclusions about long-term effects can pose methodological challenges (Boyce, 2015). In this study a proxy for a growth slope was used to characterize changes in teacher turnover over time, and approach does not allow for identification of changes between specific timepoints. Inclusion of private school teachers as a comparison allow for stronger inferences with regards to accountability policy effects, however, this study does not account for the possibility spillover in analytical models. While the school demographic variables that were significantly related to teacher perception of de-

professionalization and demoralization differed between public and private schools, suggested different types of external pressures applied to the school contexts, that conclusion cannot be confirmed by this study. Clarifying external pressures faced by private school teachers during this same time period would be an area for future research. Finally, due to complications with accounting for cost of living adjustments across multiple states, teacher pay measures were not included in the analytical models presented here, however, investigating the relationship between teacher pay and perceptions of de-professionalization and demoralization would also be an important area for future research. The use of the de-professionalization and demoralization framework in models of teacher turnover during the state and federal accountability policy era of the 1993-2008 is meant to be a starting point for the use of this framework. Applying the framework to compare data from states as the United States transitions to ESSA could further inform the research and policy community about the effects of accountability policies on the teacher workforce.

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APPENDIX A

SASS Items Used in Teacher Perception of De-professionalization Composite Variable

Question	1993-1994	1999-2000	2003-2004	2007-2008
Original Scale of Items	*(0 = No Control/influence; 5 = Complete Control- reverse coded)*	*(1 = No control/influence; 5 = A Great Deal of Control)/influence Reverse Coded*	*(1 = No control/influence; 4= A Great Deal of Control)/influence Reverse Coded*	*(1 = No control/influence; 4= A Great Deal of Control)/influence Reverse Coded*
Influence over Curriculum				
Selecting textbooks and instructional materials	T1045	T0293	T0318	T0280
Selecting content to be taught	T1050	T0294	T0319	T0281
Establishing curriculum	T1040	T0287	T0312	
Influence over Instruction				
Selecting teaching techniques	T1055	T0295	T0320	T0282
Evaluating and grading students	T1060	T0296	T0321	T0283
Determining the amount of homework to be assigned	T1070	T0298	T0323	T0285

APPENDIX B

SASS Items Used in Teacher Perception of Demoralization Composite Variable

Question	1993-1994	1999-2000	2003-2004	2007-2008
Item Original Scale: *(1 = Strongly Agree; 4 = Strongly Disagree or 1 = Serious Problem; 4 = Not a Problem)* *(recoded 1 = Strongly Disagree; 4 = Strongly Agree or 1 = Not a Problem; 4 = Serious Problem*				
Paperwork Burden				
Routine duties and paperwork interfere with my job of teaching	T1240	T0305	T0336	T0291
Negative Perception of Students				
Students dropping out	T1140	T0333	T0369	T0307
Student apathy	T1145	T0334	T0370	T0308
Lack of parent involvement	T1155	T0335	T0371	T0309
poverty	T1165	T0336	T0372	T0310
students come to school unprepared to learn	T1175	T0337	T0373	T0311
poor student health	T1185	T0338	T0374	T0312
Worry and Stress				
I worry about the security of my job because of the performance of my students on state or local tests		T0313	T0343	T0298
The stress and disappointments involved with teaching at this school aren't really worth it.			T0375	T0313
If I could get a higher paying job, I'd leave teaching as soon as possible			T0378	T0316
I think about transferring to another school			T0379	T0317
I don't seem to have as much enthusiasm now as when I began teaching			T0380	T0318
I think about staying home from school because I'm just too tired to go			T0381	T0319
I sometimes feel it is a waste of time to try to do my best as a teacher	T1305	T0318	T0349	
If you could go back to your college days and start over, would you become a teacher or not (1 = certainly would become a teacher; 5 = certainly would not become a teacher)	T1320	T0339		T0320
I have to follow rules in this school that conflict with my best professional judgement	T1280			

APPENDIX C

SASS Items Used in Principal Leadership Composite Variables

Question	1993-1994	1999-2000	2003-2004	2007-2008
Original Scale of Items	*0 = No influence, 5 = A great deal of influence*	*1 = No influence; 5 = A great deal of influence*	*1 = No influence; 4 = A great deal of influence*	*1 = No influence; 4 = Major influence*
		Managerial Leadership		
Principal influence over setting discipline policy	A765	A0118	A0098	A0082
Principal influence over hiring new teachers	A735	A0111	A0091	A0075
Principal influence over evaluating teachers	A860	A0104	A0084	A0068
Principal influence deciding how the school budget will be spent	A795	A0125	A0105	A0089
		Shared Leadership		
Teacher influence over setting discipline policy	A770	A0119	A0099	A0083
Teacher influence over setting performance standards for students		A0081	A0063	A0047
Teacher influence over establishing curriculum	A700	A089	A0070	A0054
Teacher influence over determining the content of professional development	A0835	A0097	A0077	A0061
Professional development is planned by teachers (1 = Never; 5 = Always)		A0160	A0131	A0113
Professional development is presented by teachers (1 = Never; 5 = Always)		A0161	A0132	A0114
		Instructional Leadership		
Principal influence over setting performance standards for students		A0079	A0062	A0046
Principal influence over setting establishing curriculum	A695	A0087	A0069	A0053
Principal influence over setting determining the content of professional development activities	A830	A0095	A0076	A0060
Professional Development is chosen to support the school's improvement goals (1 = Never; 5 = Always)		A0154	A0125	A0108

APPENDIX D

Mplus Syntax for Hierarchical Linear Models with Teachers Clustered within SASS Administrations and Randomly Varying De-professionalization/Demoralization on Teacher Attrition and Mobility Slopes

```
 ANALYSIS:
       TYPE=twolevel random;
       ESTIMATOR=MLR;
       INTEGRATION = MONTECARLO(100);
       process=4;

MODEL:
       %WITHIN%
      SDEPROF WITH SDEMORAL;

       ATTRIT ON female Early Late AltCert female NonWhite
                  urban rural poverty color0 color100 ZNegAd;


      ZNegAd Trans Shared Instruct ON SDEPROF SDEMORAL;
      urban rural color0 color100 poverty ON SDEPROF SDEMORAL;

     sdepr1 | ATTRIT#1 ON SDEPROF;
      sdemo1 | ATTRIT#1 ON SDEMORAL;

      sdepr2 | ATTRIT#2 ON SDEPROF;
      sdemo2 | ATTRIT#2 ON SDEMORAL;

       %BETWEEN%
   ATTRIT sdepr1 sdemo1 sdepr2 sdemo2 ON OrthTime;


OUTPUT: Sampstat Standardized Tech1 CINTERVAL;
```